SWISS UROLOGY

Schweizerische Gesellschaft für Urologie
Société Suisse d'Urologie
Società Svizzera di Urologia

SIGUP

Abstractbook

79. Jahresversammlung | **79e** Assemblée annuelle
Schweizerische Gesellschaft für Urologie
Société suisse d'urologie

Jahreskongress | Congrès annuel
Schweizerische Interessengemeinschaft für Urologiepflege
Association Suisse des Soins en Urologie

20.-22. September 2023
SwissTech Convention Center EPFL Lausanne

sgu2023.congress-imk.ch

Organized by IMK Institut für Medizin und Kommunikation AG

M01

Radiation-induced haemorrhagic cystitis treated by hyperbaric oxygen therapy: a 12-years' experience

S Vanoli; M Valerio; P Louge; R Pignel; C Iselin; D Benamran; E Grobet-Jeandin
HUG Hôpitaux Universitaires Genève

Objectives: Radiation-induced haemorrhagic cystitis (RIHC) is a late complication of pelvic radiation therapy (RT) characterized by recurrent haematuria and lower urinary tract symptoms. Hyperbaric oxygen therapy (HBO) has shown promising Results to treat RIHC due to its ability to reduce radiation-induced inflammation. This study Aimed to evaluate the outcomes of HBO in patients with RIHC in our institution.

Material and Methods: In this observational study carried out between February 2009 and January 2022, consecutive patients undergoing HBO for RIHC were included. HBO consisted of 30-60 sessions of 95 minutes at 2,5 Bar. The primary outcome was haematuria recurrence-free survival (HRFS), defined as total (no recurrence) or partial (recurrence with no further treatment needed) resolution of haematuria. We evaluated as secondary outcomes overall survival (OS), complication and salvage treatment rate, as well as potential predictors of HRFS.

Results: A total of 94 patients were included, 98% (n=92) of whom were men. Mean age was 74(SD 10). Previous RT had been administered for prostate cancer in 95% (n=89) of cases, with a mean of 62Gy (SD 17) in a mean of 26 sessions (SD 12). Mean time from RT to onset of RIHC symptoms was 80 months (SD 57). Patients underwent a mean of 26 HBO sessions (SD 12). Only 3% of patients experienced complications related to HBO (barotraumatic otitis n=2, seizure n=1). 3%(n=3) of patients showed HBO failure and underwent immediate salvage cystectomy (SC). HRFS was achieved in 70%(n=66) of patients after a mean follow-up of 42 months (SD 38). Recurrence occurred in 22%(n=21) patients in a median time of 9.3 years, requiring hospitalization in 33%(n=7) of them. SC was performed in 13% of patients (primary HBO failure n=3, recurrence after HBO n=5, invalidating microbladder n=4). In uni- and multi-variate analysis, coagulopathy, anti-aggregation, anti-coagulation, total Gray doses and number of RT sessions were not predictors of HRFS. In addition to RIHC, complications of RT consisted of urethral stenosis (US) (20%), proctitis (21%) and urinary incontinence (19%). RT dose >70Gy was significantly associated with the development of US (p=0.009). OS was 80%, and one death was attributed to RIHC.

Conclusion: HBO appears to be a safe and effective treatment for patients with RIHC, offering high rate of HRFS with low rate of complications. Future efforts should focus on the identification of predictors of HBO success to cure RIHC.

M02

Thromboprophylaxis during neoadjuvant chemotherapy before radical cystectomy is associated with a lower risk of venous thromboembolism and bleeding

L Antonelli; S Sigg; CD Fankhauser
Luzerner Kantonsspital (LUKS)

Introduction

Venous thromboembolic events (VTE) can occur in patients undergoing radical cystectomy, with the majority of VTEs happening during neoadjuvant chemotherapy. The ASCO Clinical Practice Guideline Update recommends thromboprophylaxis in cancer patients with a high VTE and low bleeding risk. However, the risks of VTE and bleeding with or without thromboprophylaxis in bladder cancer patients undergoing neoadjuvant chemotherapy before cystectomy are not well-defined.

Methods

We conducted a retrospective cohort study of 3604 patients with localized or locally advanced bladder cancer who underwent cystectomy across 28 centers in 13 countries between January 1990 and December 2021. Multivariable adjusted time-to-event analyses were performed to estimate the effect of prophylactic anticoagulation on VTE and bleeding, adjusting for potential confounders.

Results

Of 3604 patients, 1809 received thromboprophylaxis before cystectomy. Patients receiving thromboprophylaxis compared to patients without thromboprophylaxis before cystectomy had not only a lower risk to experience VTE (hazard ratio (HR) 0.316 [95% CI, 0.123 to 0.809], p-value of 0.01629) but also a lower risk of bleeding (HR 0.184 [95% CI, 0.049 to 0.694], p-value: 0.01246).

Conclusion

In this large multinational cohort study, thromboprophylaxis was associated with a lower risk of VTE and bleeding in bladder cancer patients undergoing cystectomy. Together with data from randomized trials showing a similar effect in other surgical patients our large retrospective study suggests preoperative thromboprophylaxis could improve outcomes in patients scheduled for cystectomy.

M03

How long is the learning curve for robot-assisted radical cystectomy with intracorporeal urinary diversion?

A Elyan; J Ebbing; HH Seifert; A Hosseini; A Mortezavi
Basel University Hospital

Background

Robot-assisted laparoscopic radical cystectomy (RARC) with intracorporeal urinary diversion (ICUD) is a technically challenging procedure. Recent data promotes the superiority of the technique compared to an open approach. However, a continuous assessment of perioperative outcome data and awareness of the learning curve are essential to not compromise patient safety. Here we report updated perioperative outcomes of a single center reaching a favorable plateau after transition from open cystectomy to a fully intracorporeal approach.

Methods

We prospectively collected perioperative parameters of consecutive patients undergoing RARC with ICUD at our tertiary care center between May 2017 and December 2022. The procedures were performed by three surgeons with intermittent external proctoring available throughout the study period. Our primary endpoint was the postoperative high-grade complication rate, and secondary outcomes included conversion rate, operation time, lymph node yield, and length of stay. The cohort was divided into two groups (G1: cases 1-61, G2: cases 62-92) to assess the learning curve. All patients had 90-day follow-up data available.

Results

A total of 91 patients (13 female) underwent RARC with ICUD. The 90-day high-grade complication rate (Clavien ≥ III) was 18.7 %. Conversion to an open surgical approach was necessary in 8 cases (8.8 %). The mean duration of the operation was 393 min with a median lymph node yield of 17.5. The median length of the hospital stay was 9 days. When comparing G1 and G2 a decrease of high-grade complications from 19.7 % (n = 12) to 16.7 % (n = 5) (p = 0.95) was observed. No conversions to an open approach occurred in G2, while 8 cases (13.1 %) required conversion in G1. The median operation time decreased from 397 minutes in G1 to 385 minutes in G2 with the median lymph node yield increasing from 17 in G1 to 21 in G2 (p = 0.08). Median length of hospital stay decreased from 11 days in G1 to 8 days in G2.

Conclusion

Approximately 90 cases of RARC with ICUD are needed to achieve a plateau and a favorable high-grade complication rate comparable to that reported by very high-volume centers. Incorporating external proctoring and fellowship programs ensures acceptable complication rates and operation times in the initial transition phase from open to the minimal invasive technique. However, the learning curve for operation time appears to be longer.

M04

Surgical safety and quality of radical cystectomy and pelvic lymph node dissection after neoadjuvant Durvalumab and Cisplatin/Gemcitabine for muscle invasive bladder cancer: Results from the SAKK 06/17 phase II study

L Afferi[1]; M Spahn[2]; S Hayoz[3]; RT Strebel[4]; SI Rothschild[5]; H Seifert[6]; H Seifert[6]; BC Özdemir[7]; B Kiss[8]; P Maletzki[9]; D Engeler[10]; G Wirth[11]; B Hadaschik[12]; I Lucca[13]; H John[14]; A Sauer[15]; M Müntener[16]; L Bubendorf[17]; M Schneider[3]; J Musilova[3]; U Petrausch[18]; R Cathomas[19]
[1] Department of Urology, Luzerner Kantonsspital, Lucerne, Switzerland; [2] Lindenhofspital Bern, Bern, Switzerland; [3] Competence Center of SAKK, Bern, Switzerland; [4] Division of Urology, Kantonsspital Graubünden, Chur, Switzerland; [5] Department of Medical Oncology, University Hospital Basel, Basel, Switzerland; [6] Department of Urology, University Hospital Basel, Basel, Switzerland; [7] Department of Oncology, Inselspital Bern, Bern, Switzerland; [8] Department of Urology, Inselspital Bern, Bern, Switzerland; [9] Department of Urology, Kantonsspital Baden, Baden, Switzerland; [10] Department of Urology, Kantonsspital St. Gallen, St. Gallen, Switzerland; [11] Department of Urology, University Hospital HUG, Geneva, Switzerland; [12] Department of Urology, University Hospital Essen, Essen, Germany; [13] Department of Urology, University Hospital CHUV, Lausanne, Switzerland; [14] Department of Urology, Kantonsspital Winterthur, Winterthur, Switzerland; [15] Department of Urology, Kantonsspital Aarau, Aarau, Switzerland; [16] Department of Urology, Triemlispital, Zürich, Switzerland; [17] Department of Pathology, University Hospital Basel, Basel, Switzerland; [18] Onkozentrum Zürich, Switzerland; [19] Divison of Oncology/Hematology, Kantonsspital Graubünden, Chur, Switzerland

Objectives: We report on surgical safety and quality of pelvic lymph node dissection (PLND) in a prospective cohort of patients (pts) treated with radical cystectomy (RC) and PLND for muscle invasive bladder cancer (MIBC) after neoadjuvant chemo-immunotherapy.

Material & Methods: SAKK 06/17 was an open label single arm phase II study including 61 cisplatin-fit pts with stage cT2-T4a cN0-1 operable muscle-invasive urothelial cancer. Pts received 4 cycles of neoadjuvant Cis/Gem q3w in combination with 4 cycles durvalumab 1500mg q3w followed by surgery. Surgery was performed 4 to 8 weeks after the last neoadjuvant trial treatment (NAT) cycle from an experienced urologic surgeon. RC and PLND templates were defined in the protocol and based on EAU guidelines. Prospective quality assessment of surgeries was performed via central review of surgical images by an experienced surgeon. Perioperative complications (i.e. within 30 days from surgery) were assessed with the Clavien-Dindo Classification. Data were analyzed descriptively.

Results: A total of 51 pts received RC and PLND. All pts received NAT as per protocol, with more than 90% receiving full number of cycles. Median pts' age was 66 years; 13 (25.5%) pts had cT3/4 MIBC and 9 (17.6%) were cN+. Open RC was performed in 32 (64.7%) pts, remaining RCs were either laparoscopic or robot-assisted. Urinary diversion consisted of ileum conduit in 27 (52.9%) and ileal neobladder in 21 (41.2%) pts. Median operative time was 360 minutes and median number of lymph nodes removed was 29 (range: 4, 62). No intraoperative complications were registered. Grade ≥3 perioperative complications were reported in 12 pts (23.5%), with ureteroenteric anastomotic leak and wound dehiscence being the most common (each 5.9%). No deaths were recorded. Complete nodal dissection (100%) was performed at the level of the right obturator; in 50 pts (98%) at the external iliac vessels, left obturator and right internal iliac vessels; in 49 (96.1%) at the left internal iliac vessel; in 36 (70.6%) and 38 (74.5%) at the left and right presacral level, respectively.

Conclusion: This study supports the surgical safety of the neoadjuvant chemo-immunotherapy approach in patients with MIBC. Extent and completeness of PLND varies between patients, highlighting the need to communicate and monitor the surgical template.

M05

Functional One-Year Results of Intracorporeal Urinary Diversion with Orthotopic Neobladder after Robotassisted Radical Cystectomy - Updated Results

P Kraft; F Obrecht; C Schregel; J Tornic; G Frölicher; K Böhler; C Padevit; H John
Kantonsspital Winterthur KSW

Aim:
The **Aim** of this study was to investigate the urodynamic, functional and metabolic outcomes in patients undergoing robotic assisted radical cystectomy and complete intracorporeal urinary diversion (iRARC) with an orthotopic neobladder.

Materials and Methods:
In this institutional review board-approved, retrospective study, we identified all patients who underwent (iRARC) for urothelial carcinoma with an orthotopic modified Studer neobladder between November 2015 and November 2021. During follow-up, continence was assessed by pad count per 24 hours. Through urodynamic evaluation we determined neobladder capacity, pressure at maximum filling, compliance, uroflowmetry, and postvoid residual volume. Laboratory values were retrieved from the clinic information system.

Results: Twenty-three male patients (mean age 65 ± 8 years, BMI 27.6 ± 4.2 kg/m2) were included. After one year, all patients were socially continent, 7/23 (30%) patients were completely dry and 16/23 (70%) reported a median use of 1 pad per 24 h (IQR 0 – 2 pads). Use of pads was necessary in 6/23 (26%) and 13/23 (57%) patients during daytime and night time, respectively. The median follow-up time from surgery to urodynamic evaluation was 11 months (IQR 11 – 14 months). Urodynamic measurements showed a total urinary neobladder volume of 473 ± 144 mL, a detrusor pressure at maximum filling of 20.1 ± 10.6 cm H2O, a maximum flow of 17.9 ± 8.6 mL/s, a calculated compliance of 28.4 ± 25.4 mL/cm H2O, and a postvoid residual volume of 66 ± 139 mL. Intermittent clean self-catheterization was needed in 3/23 (13%) patients. At 6 and 12 months after surgery, GFR (70.5 ± 20.1 and 66.1 ± 18.7 µmol/l), pH (7.3 ± 0.0 and 7.4 ± 0.1), and base excess (-0.3 ± 2.5 and 0.2 ± 2.0) were similar (all, $p > .05$). Bicarbonate substitution due to metabolic acidosis was necessary in 4/23 (17%) patients. No uretero-enteric strictures occurred, and no ureteral stenting nor nephrostomy was required.

Conclusion:
One-year postoperative patients with intracorporeal urinary diversion with an orthotopic neobladder shows satisfying urodynamic, functional, and metabolic balance **Results**.

M06

Follow-Up Strategies after Trimodal Treatment for Bladder Cancer: A Comprehensive Review

E Kaufmann1; C Fankhauser2
1 University of Zurich; 2 Department of Urology, Luzerner Kantonsspital, Luzern, Switzerland

Introduction:
Optimal follow-up strategies following trimodal treatment for bladder cancer play a crucial role in detecting oncological relapse and managing complications associated with transurethral resection and chemoradiation. This article provides a comprehensive summary of the location and timing of relapse, potential functional complications, and existing published follow-up protocols. The **Aim** is to enhance understanding and facilitate the development of personalized follow-up protocols based on established risk factors.

Methods:
A thorough literature search and review of current guidelines and institutional follow-up protocols were conducted.

Results:
We identified 165 publications, of which 42 studies (27 retrospective, 15 prospective) were eligible for inclusion, reporting 7.335 patients (ranging from 24 to 728 per manuscript).
Among the identified publications, the most common site of relapse was observed in the bladder (19-56%), followed by distant recurrence (15-35%), specifically nodal recurrence was reported in 13-16%. Various risk factors associated with relapse and inferior survival were proposed, including higher disease stage (>T2), presence of carcinoma in situ (CIS), hydronephrosis, multifocality, histological subtypes, incomplete transurethral resection of bladder tumor (TURBT), incomplete response to induction therapy, as well as age, comorbidities, and malnutrition. The analysed follow-up protocols varied in terms of the number, timing, and types of recommended investigations, but overall, they showed similar recommendations.

Discussion:
Future research should focus on evaluating the impact of specific follow-up protocols on oncological and functional outcomes following trimodal treatment. It is crucial to develop personalized follow-up protocols based on established risk factors, as this may lead to improved patient outcomes and resource allocation.

M07

The role of preoperative immunonutrition on morbidity and immune response after cystectomy: protocol for a multicenter randomized controlled trial (INCyst Trial)

l Derré1; F Crettenand1; S Rodrigues-Dias1; B Kiss2; T Tawadros3; S Domingos-Pereira1; G Nuno1; Y Cerantola1; B Roth1; I Lucca1
1 CHUV - University Hospital; 2 Bern University Hospital (Inselspital); 3 Hopital Riviera Chablais, Rennaz

Introduction
Cancer, malnutrition and surgery negatively impact patient's immune system. Despite standardized surgical technique and the development of new perioperative care protocols, cystectomy morbidity remains a serious challenge for urologists. Most common postoperative complications, such as infections and ileus, often lead to longer length of stay and worse survival. The immune system and its interaction with the gut microbiota play a pivotal role in cancer immunosurveillance and in patient's response to surgical stress. Malnutrition has been identified as an independent and modifiable risk factor for both mortality and morbidity. Immunonutrition (IN) may improve the nutritional status, immunological function and clinical outcome of surgical patients. **Aim**s of the study are 1) to evaluate the impact of IN on morbidity and mortality at 30 and 90 days after cystectomy, 2) to determine immune and microbiota signature that would predict IN effect.

Method
This is a multicenter, prospective, controlled, pragmatic, parallel-group comparative study, supported by the Swiss National Science Foundation (NCT05726786), with randomization stratified by centers. A total of 232 patients are planned to be enrolled between April 2023 and June 2026. Three participating centers (Lausanne, Bern and Riviera-Chablais) have been selected. All patients undergoing elective radical and simple open cystectomy will be randomly assigned to receive 7 days of preoperative IN (Oral Impact®, Nestlé, Switzerland) versus standard of care (control group) and followed for 90 days after surgery. For the exploratory outcomes, blood, serum, urine and stools will be collected from patients included in Lausanne. To determine the impact of IN on immune fitness, patients enrolled at the CHUV will be vaccinated against influenza and the establishment of the vaccine-specific immune response will be followed. Analysis of the microbiota and expression of Argininosuccinate synthetase 1 will also be performed.

Discussion and Conclusion
Strengths of the INCyst study include the randomized, multicenter, prospective design, the large number of patients studied and the translational investigation. This study will challenge the added-value of preoperative IN in patients undergoing cystectomy, assessing the clinical effect of IN on the onset of post-operative morbidity and mortality after cystectomy. Additionally, it will provide invaluable data on the host immune response and microbiota composition.

M08

Urodynamics: Imposition or not as bad as it seems? Secondary analyses from a randomized controlled trial

O Gross1; M Kasten1; MS Wettstein2; CE Anderson3; V Birkhäuser1; J Borer2; M Koschorke1; MD Liechti1; S McCallin1; U Mehnert1; R Röthlisberger1; H Sadri1; L Stächele1; S van der Lely1; TM Kessler1; L Leitner1
1 Department of Neuro-Urology, Balgrist University Hospital, University of Zürich, Zürich, Switzerland; 2 Klinik für Urologie USZ; 3 Swiss Paraplegic Centre, Nottwil, Switzerland

Introduction: Urodynamic investigation (UDI) is the gold standard for evaluating refractory lower urinary tract symptoms. However, its invasive nature, involving bladder and rectal catheterization, can cause emotional and physical discomfort and side effects. The **Aim** of these secondary analyses from a randomized controlled trial (RCT) assessing artifact susceptibility of water- and air-filled urodynamic systems was to assess discomfort and adverse events (e.g. urinary tract infections (UTI)) of UDI.

Methods: From 04/2021-01/2022, 490 patients (40% females) participated in the RCT and underwent UDI. In case of asymptomatic bacteriuria, no antibiotic prophylaxis was given. After removal of the catheters, patients were asked to rate their emotional perception and pain on a numerical rating scale from 0-10, with lower values indicating less discomfort/pain. A follow-up telephone interview was conducted 7-14 days later to assess examination-related adverse events. Chi-square test and logistic regression were used to evaluate associations.

Results: Median overall emotional discomfort and pain were 2 (Q1-Q3: 0-5) and 2 (Q1-Q3: 0-4). Female patients reported stronger emotional discomfort (p=0.004). Pain ratings did not differ significantly between sex (p=0.112). In the follow-up interview, 30% (146/490) reported self-limiting pain with a median intensity of 5 (Q1-Q3: 3.5-6) and a duration of ≤72h in 81% (118/146) and >72h in 19% (28/146) of cases. Increased urgency was found in 18% (90/490) (≤72h: 70% (63/90); >72h: 30% (27/90)). 6% (28/490) of patients developed a UTI. UTI was significantly associated with UTI within the past 12 months (odds ratio (OR) 3.01 95% confidence interval (CI) 1.38-6.58, p=0.006)), asymptomatic bacteriuria at UDI (OR 4.54, 95% CI 1.54-13.41, p=0.006) and higher Charlson-Comorbidity-Index (OR 1.22, 95% CI 1.06-1.4, p=0.005). However, the number of positive urine cultures needed to treat to prevent one UTI was 16 (95% CI 9.6-38.6). Gross hematuria was present in 8% of patients, with 34% of these patients taking anticoagulants or platelet aggregation inhibitors. Severe adverse events requiring hospitalization were seen in 1% (5/490) with 3 of them being examination related (UTIs) and 2 not examination related.

Conclusions: UDI is a well-tolerated examination with an acceptable rate of short- and medium-term adverse events. Prophylactic antibiotics to reduce post-UDI UTIs do not seem justified.

M09

Blasenfunktion von Personen mit einer neurogenen Blasenfunktionsstörung während und im Anschluss an die Primärrehabilitation

J Krebs1; J Wöllner2; F Rademacher2; J Pannek2
1 Schweizer Paraplegiker Forschung; 2 Schweizer Paraplegiker-Zentrum Nottwil

Ziele

Charakterisierung der Blasenfunktion während und im ersten Jahr nach der Primärrehabilitation bei Personen mit einer neurogenen Blasenfunktionsstörung (nBFS).

Material und Methoden

Im klinischen Informationssystem einer Spezialklinik für Querschnittmedizin wurden Patienten/innen identifiziert, welche zwischen Januar 2015 und Dezember 2017 eine Primärrehabilitation absolviert hatten. Es wurden Angaben zur Person, Blasenmanagement, Medikation und die urodynamischen Daten an drei Zeitpunkten erhoben: erste urodynamische Untersuchung, letzte Untersuchung während Rehabilitation und erste Untersuchung nach Rehabilitation. Die urodynamischen Daten wurden für die Läsionskategorien zervikal, hoch-thorakal (ab T6), tief-thorakal und lumbo-sakral analysiert. Veränderungen der urodynamischen Daten im Verlauf und die Unterschiede zwischen den Läsionskategorien wurden evaluiert. Ausserdem wurde die Anzahl Personen mit Detrusorüberaktivität innerhalb der ersten 40 Tage nach Querschnittlähmung (QL) ermittelt.

Resultate

Es wurden die Daten von 207 Männern (75.8%) und 66 Frauen (24.2%) mit einem Durchschnittsalter von 55±19 Jahren analysiert. Initial (63 Tage nach QL), betrugen die medianen Werte für Blasenkapazität, maximalen Detrusordruck und Compliance 460ml, 10cmH2O und 70ml/cmH2O. Im Verlauf zeigte sich ein signifikanter (p=0.002) Anstieg des maximalen Detrusordrucks bei Personen mit einer zervikalen oder thorakalen Läsion, mit signifikant (p= 0.02) höheren Werten im Vergleich zu Personen mit einer lumbo-sakralen Läsion. Bei der letzten Untersuchung während der Rehabilitation (24.5 Wochen nach QL) waren die medianen Werte für Blasenkapazität, maximalen Detrusordruck und Compliance 450ml, 17cmH2O und 61ml/cmH2O. In der ersten Untersuchung nach der Rehabilitation (10.6 Monate nach QL) stieg der maximale Detrusordruck auf 20cmH2O und die Blasenkapazität sowie Compliance sanken auf 430ml, respektive 65ml/cmH2O. Der Anteil an Personen, welche eine Therapie der Detrusorüberaktivität benötigten stieg von 5.6% auf 31.0% bei der letzten Untersuchung. Eine Detrusorüberaktivität wurde bei 11 von 24 Personen (45.8%) mit einer urodynamischen Untersuchung innerhalb der ersten 40 Tage nach QL beobachtet.

Schlussfolgerungen

Die Daten untermauern die Notwendigkeit regelmässiger urodynamischer Kontrollen, um relevante Ereignisse wie einen Detrusordruckanstieg zu detektieren. Die erste urodynamische Untersuchung sollte in den ersten 6-8 Wochen nach der QL durchgeführt werden.

M10

Weiterbildungs- und Arbeitsbedingungen urologischer Assistenzärzt:innen in der Schweiz - Resultate der Assistenzärzt:innen Umfrage 2023

S Sigg[1]; A Luca[1]; F Lehner[2]; S Dugas[3]; M Kasten[4]; J Blanc[5]; F Aschwanden[1]
[1] Luzerner Kantonsspital (LUKS); [2] Universitätsspital Zürich (USZ); [3] Kantonspital Baselland; [4] Kantonsspital Aarau; [5] CHUV Centre hospitalier universitaire vaudois

Ziel:
Evaluierung der gegenwärtigen Aus- und Weiterbildungsbedingungen sowie Zukunftsvorstellungen der urologischen Assistenzärzt:innen in der Schweiz.

Material und Methoden:
Wir führten im März 2023 eine web-basierte Umfrage durch, welche an alle in der Schweiz tätigen Assistenzärzt:innen versandt wurde. Die 64 Fragen gliederten sich in die Bereiche Demographie, urologische Weiterbildung, operative Weiterbildung, Vereinbarkeit von Familie und Beruf, aktuelle Arbeitssituation, Einfluss ökonomischer Faktoren auf die ärztliche Tätigkeit, Forschung und Zukunft.

Resultate:
Total nahmen 63 in der Schweiz tätige Assistenzärzt:innen teil. Die Mehrzahl (84%) aus der deutschsprachigen Schweiz. 60% der Teilnehmenden sind Männer, mehr als 90% arbeiten an einem öffentlichen Spital. Die mediane Arbeitszeit beträgt 55 Stunden, Überstunden werden in 72% korrekt erfasst und in 87% finan**Ziel**l oder zeitlich vergütet.
Ein strukturierter Weiterbildungsplan ist in 72% vorhanden, wöchentliche Fortbildungen finden bei 92% statt. Eine strukturierte Weiterbildung von ≥ 2h/Woche wird jedoch nur 25% der Teilnehmenden angeboten. Der Weiterbildungskatalog wird von 75% als nicht mehr zeitgemäss wahrgenommen. Insbesondere das Erreichen der Fallzahlen für transurethrale Eingriffen und Eingriffe an der Urethra bereitet vielen Mühe (43% bzw. 66%).
Jeder zweite Teilnehmende hat bereits daran gedacht, die praktische ärztliche Tätigkeit aufzugeben, 30% würden retrospektiv nicht erneut Medizin studieren. Zufrieden mit der aktuellen beruflichen Situation sind 75%, wobei Vereinbarkeit von Beruf und Familie und Work-Life Balance von 51% als ungenügend beurteilt werden.
An einer wissenschaftlichen Karriere sind 45% interessiert, der häufigste Grund für Unzufriedenheit mit der Forschungstätigkeit ist die fehlende Zeit (83%). Eine selbständige Praxistätigkeit streben 26% an, der operative Schwerpunkttitel wird von 61% angestrebt. Fast 80% möchten nach dem Facharzt in einem Teilzeitpensum arbeiten.

Schlussfolgerungen:
Der urologische Weiterbildungskatalog, das Angebot der strukturierten Weiterbildung und die Vereinbarkeit von Familie und Beruf liegen unter den Erwartungen der Assistenzärzt:innen der Schweiz. Eine kritische Optimierung des aktuellen Weiterbildungskataloges, der Arbeitszeitmodelle und der strukturierten Weiterbildung sind in Betracht zu ziehen, um die Attraktivität des Facharzttitels aufrecht zu halten.

M11

Prospective Multicenter Validation of the Stockholm-3 (Stockholm3) Test in a Middle European Population

A Elyan[1]; K Saba[2]; A Sigle[3]; C Wetterauer[1]; H Püschel[1]; C Engesser[4]; S Attianese[1]; P Maurer[5]; A Deckart[6]; R Strebel[7]; C Gratzke[3]; HH Seifert[1]; CA Rentsch[1]; A Mortezavi[1]
[1] Basel University Hospital; [2] Hirslanden Klinik Aarau; [3] Albert-Ludwigs-Universität Freiburg; [4] St. Claraspital Basel; [5] UROLOGIE NORDWESTSCHWEIZ; [6] Praxis Dr. Deckart; [7] Cantonal Hospital of Grisons, Chur

Purpose: Stockholm3 blood test has been shown to decrease overdetection of prostate cancer (PCa) while maintaining ability to detect clinically significant PCa (csPCa) in the Swedish population. However, the test incorporates potentially population-specific single nucleotide polymorphism (SNP) testing and has yet to be validated beyond Scandinavia. As a result, our **Aim** is to validate the performance of the Stockholm3 test in a Middle European population.

Methods: A total of 369 men aged 46-84 years referred for prostate biopsy after multiparametric MRI were prospectively included between 2020-2022 at three centers in Germany and Switzerland. Participants underwent blood sampling for analysis of the Stockholm3 testing before prostate biopsy. We performed systematic and MRI-targeted biopsies of lesions with a Prostate Imaging Reporting and Data System (PI-RADS) score ≥ 3. The primary outcome was the detection of csPCa, defined as an ISUP grade group (GG) of ≥ 2. We measured the diagnostic accuracy for detecting csPCa by calculating the area under the curve (AUC), sensitivity and specificity.

Results: Including 342 men for final analysis, the median PSA was 6.5 ng/mL (IQR 4.6-9.9) and 135 (39.5%) patients had an abnormal digital rectal examination. A first-degree relative with PCa was reported in 51 (14.9%) and prior negative prostate biopsy in 66 (19.2%) of the cases. A suspicious lesion on MRI was observed in 300 (87.7%) patients (PI-RADS III: 15.2%, IV: 46.5%, V: 26.0%). The median number of sampled cores was 28 (IQR 15-32). PCa and csPCa were detected in 201 (58.8%) and 154 (45.0%) of the participants, respectively. The Stockholm3 test showed superior discrimination for csPCa compared to PSA (AUC 0.77 [95% CI, 0.72-0.82] vs. 0.66 [95% CI, 0.60-0.72]). Using the predefined Stockholm3 cut-off of 11%, 73 (21.0%) prostate biopsies could have been omitted at the expense of missing out 12 of 154 (8%) men with csPCa and 2 of 72 (2.8%) with a GG >2. Stockholm3 for detecting csPCa had a sensitivity of 92.3% (95% CI, 86.9-95.9) and specificity of 32.6% (95% CI, 26.0-39.8). The Stockholm3 test demonstrated acceptable calibration in predicting csPCa in the present cohort.

Conclusions: The Stockholm3 test would have reduced the number of unnecessary biopsies at the expense of missing a limited number of csPCa cases in this cohort of men with suspicious MRI and high likelihood for csPCa. It confirms the test as an important clinical decision tool.

M12

Pathological Results of targeted prostate biopsies of PI-RADS 3 lesions found on mpMRI of the prostate

J Horak[1]; S Bauer[2]; M Baumgartner[2]; P Cerncic[3]; O Donati[4]; U Egli[2]; J Fehr[2]; T Hermanns[2]; A Hirschi--Blickenstorfer[5]; RA Largo[6]; M Mack[2]; C Möckel[2]; M Patak[4]; U Petrausch[7]; T Sulser[2]; H Vees[8]; W Blattner[2]; N Zantl[2]; A Omlin[7]
[1] Klinik Hirslanden Zürich; [2] Zentrum für Urologie Zürich - Klinik Hirslanden; [3] Institut für histologische und zytologische Diagnostik AG Aarau; [4] Octorad AG - Klinik Hirslanden; [5] Klinik für Hämatologie und Onkologie Hirslanden Zürich; [6] Zentrum für Urologie Winterthur; [7] OnkoZentrum Zürich Hirslanden; [8] Radiotherapie Hirslanden Männedorf

Background

Multiparametric magnetic resonance imaging (mpMRI) of the prostate is widely used as a diagnostic tool for the detection of prostate cancer (PCa). The PI-RADS classification is used for standardized reporting. A PI-RADS score 3 indicates a lesion where the presence of clinically significant cancer is equivocal. We report the biopsy findings of a patient cohort with exclusive PI-RADS 3 lesions.

Method

Patients (pts) with PI-RADS 3 lesions only on their MRI undergoing a prostate biopsy in our center between 10/2017 and 10/2022 were identified from our prospective registry. MRIs were performed at different centers but delineation of the lesions for the biopsy was performed by experienced radiologists of our center. MRI/ultrasound fusion guided and systematic biopsies were performed.

Results

Out of 1864 pts in our database, 149 (8 %) met the inclusion criteria. The median age was 63 years (range 37 – 78) and the median PSA value was 5.54 ng/ml (range 0.65 – 69.7). In 111 patients (75 %) mpMRI showed only 1 lesion, in 35 patients (24 %) 2 lesions were found and in the remaining (1 %) pts 3 and 4 lesions. 57 patients (38 %) received both systematic as well as targeted biopsies and 92 pts (62 %) only lesion-targeted biopsies.
Overall, 105 pts (70 %) had negative and 44 patients (30 %) positive biopsy **Results**. In pts diagnosed with PCa, targeted biopsies were positive in 34 pts (21 patients targeted biopsies only, 13 patients targeted and systematic biopsies), in 10 pts (2 3%) PCa was found only in the systematic biopsy.
In the 34 pts with PCa in the PI-RADS 3 lesions targeted biopsies 41 PCa lesions were found in total. Of these 20 lesions (49 %) showed Gleason score (GS) 3 + 4 tumors, 13 lesions (31 %) GS 3 + 3 PCa, 4 lesions (10 %) GS 4 + 3 PCa and the remaining 4 lesions (10 %) were GS 8 or higher PCa. In the 10 pts with PCa only on the systematic biopsies, 7 pts (16 %) had GS 3 + 3, 2 pts (5 %) GS 3 + 4 and 1 pt (2 %) GS 4 + 3 PCa.

Conclusion

In our cohort 30 % of pts with PI-RADS 3 lesions had biopsy-proven PCa. In the targeted biopsies, 23 % were diagnosed with PCa of which 32 % represented insignificant cancers and 68 % significant cancers. 7 % significant PCa were identified by systematic biopsies only. According to our data and in line with the European Urology Association guidelines, biopsy evaluation of PI-RADS 3 lesions is recommended.

M13

Predicting pathological tumor and prostate volume in prostate cancer based on micro-ultrasound findings

A Richemond[1]; M Peters[2]; S Schaer[1]; J Dagher[1]; S La Rosa[3]; B Roth[1]; M Valerio[4]; A Rakauskas[1]
[1] Lausanne University Hospital (CHUV); [2] University Medical Center Utrecht; [3] University of Insubria; [4] Geneva University Hospitals (HUG)

Aim and Objectives

Micro-ultrasound (MicroUS) is a promising technology in prostate cancer (PCa) diagnostics. Operating at a high resolution and relying on a 29 MHz transducer microUS allows precise visualization of PCa lesions in the posterior part of the prostate. In this study, we **Aim**ed at evaluating the agreement between microUS posterior part tumor size and pathological tumor size. Our secondary **Aim** was to compare the agreement between microUS, mpMRI and pathological prostate volume.

Methods

Retrospective analysis of consecutive patients with mpMRI and micro-ultrasound diagnostic assessment and biopsy proven PCa who underwent radical prostatectomy. Micro-ultrasound posterior zone tumor and prostate volume was defined by an expert urologist using a dedicated software. Prostate volume on mpMRI was defined by an expert radiologist. Subsequently, both imaging modalities were compared to whole mount histopathology tumor and prostate volume correlates. To evaluate agreement between microUS tumor volume and pathological tumor volume, median differences in tumor size was compared using Wilcoxon signed rank test. To evaluate the agreement between mpMRI, microUS and final pathology prostate volume, mean differences in prostate volume was compared using paired samples t-test. A p value of less than 0.05 was considered statistically significant.

Results

65 men were included in the study with median age of 64 (IQR 60-69) and a median PSA of 8,5 ml (IQR 6,3-13,5). In total 104 lesions were identified in the final pathology. On microUS 46 (44%) posterior tumors were visible, while 42 (40%) lesions were in the transitional zone and 16 (16%) nonvisible. 89% of the visible tumors had ≥ ISUP 2 disease. Median microUS and pathological tumor size was 1.05 ml (IQR 0.4-2.7) and 1.2 ml (IQR 0.6-4), respectively. This indicates that on average microUS underestimated pathological tumor volume by 0.15 ml ($p < 0.01$). The mean mpMRI, microUS and pathological prostate volume was 42 ml (SD 23), 50 ml (SD 16) and 53 ml (SD 17), respectively. This indicates that mpMRI and microUS underestimated the pathological prostate volume by 11 ml ($p < 0.01$) and 3 ml ($p = 0.47$), respectively.

Conclusion

MicroUS tends to slightly underestimate pathological tumor size but is highly accurate with a difference of 0.15 ml. It also outperforms prostate mpMRI in prostate volume assessment. Our study shows that MicroUS could be useful in planning focal treatments or radical prostatectomy strategy.

M14

Long-Term follow-up after initial negative prostate biopsy: Comparison of conventional TRUS against mpMRI-fusion biopsy

T Scherer[1]; K Alshazly[2]; B Kaufmann[1]; U Bieri[1]; K Saba[3]; A Mortezavi[4]; D Eberli[1]; C Poyet[1]
[1] Universitätsspital Zürich; [2] Universität Zürich; [3] Klinik Hirslanden Aarau; [4] Universitätsspital Basel

Background
Men after an initial negative transrectal ultrasound (TRUS)-guided prostate biopsy are known to have a low risk of PCa diagnosis and mortality during follow-up. As biopsy practice has evolved over the last decade, mpMRI-guided biopsy has become the standard of care, less is known if an initial negative mpMRI-guided biopsy is associated with the same risk of PCa diagnosis and mortality during follow-up. The present study **Aim**ed to investigate the risk differences of developing localized, metastatic or deadly PCa after either a negative TRUS or mpMRI-guided prostate biopsy in our tertiary hospital.

Materials and Methods
All men with an initial negative prostate biopsy at our institution between 2004-2021 were retrospectively analyzed. Clinical data (Age, DRE, PSA, FH) and biopsy technique were recorded. Patients were divided into two groups, whether they received a mpMRI prior to the biopsy (MRI group) or not (TRUS group). The following follow-up parameters were recorded: repeated biopsy, presence of significant PCa (defined as ISUP Grade ≥2), PCa metastasis and mortality. Patients who had a follow-up of < one year were excluded. Categorical and continuous variables were compared by chi-squared tests and t-tests, respectively.

Results
A total of 899 men underwent an initial negative prostate biopsy with an available follow-up of > one year. 791 (88%) men underwent a conventional TRUS biopsy whereas 108 (12%) men underwent a mpMRI fusion biopsy. Median follow-up time was 133 months (Interquartile range (IQR) 91 – 181 m) for all patients, 142.8 months (IQR 111 – 185 m) in the TRUS group and 60 months (IQR 45 – 73 m) in the MRI group. In the TRUS group, 601 (76.0%) patients underwent at least one additional biopsy, of which 98 (12.2%) were diagnosed with significant PCa. In the MRI group, 29 (26.9 %) underwent a second biopsy of which 12 (11.1%) men were diagnosed with significant PCa (p=0.704). A total of 16 (1.9%) patients in the TRUS group and one (0.9%) in the MRI group were diagnosed with metastatic PCa (p=0.432), and 2 (0.2%) vs 0 (0%) died of PCa (p=0.601), respectively.

Conclusions
Our study confirms that men after an initial negative prostate biopsy have a very low risk of developing metastatic or deadly PCa during long-term follow-up. Using MRI before biopsy did relevantly reduce the amount of a second prostate biopsy during follow-up, but was not associated with different numbers of PCa diagnoses or metastatic/deadly PCa during follow-up

M15
Predicting functional urinary outcome following Low-Dose-Rate Brachytherapy for Prostate Cancer

G Rüedi

Objectives: To predict functional urinary outcome after low-dose-Brachytherapy (LDR-BT) we evaluated different predictors and developed a formula to calculate an individual's probability of poor urinary function following LDR-BT.

Subjects and Methods: We analysed data from the Swiss LDR-BT database of patients who had International Prostate Symptom Score-Quality of life (IPSS-QoL) data 3 years after LDR-BT and/or transurethral resection (TURP) at follow-up. We defined poor functional urinary outcome as an IPSS Quality of Life (QoL) score >3 (where 4 is mostly dissatisfied, 5 is unhappy, and 6 is terrible) at the 3-year mark or transurethral resection of the prostate (TURP) at any time during follow-up and used a composite primary endpoint to test the association of different predictors with univariable and multivariable logistic regression.

Results: IPSS with an odds ratio (OR) of 1.13 ($p < 0.01$) in the univariable model and an OR of 1.18 ($p < 0.01$) in the multivariable model and prostate volume (PV) with an OR of 1.04 (p 0.001) in the univariable model and an OR of 1.04 (p 0.04) in the multivariable model. were the only two predictors with statistical significance. Age, prostate specific antigen (PSA), peak urinary flow rate (Qmax) and the postvoid-residual urine volume (PVR) showed no significance. We used all predictors to develop a risk calculator to individually calculate the probability of a poor functional urinary outcome after LDR-BT.

Conclusion: We demonstrated that it is possible to predict the probability of a poor functional outcome after LDR-BT for prostate cancer and developed a risk calculator to support shared decision-making for individual therapy decisions.
Keywords: prostate cancer, low-dose-rate brachytherapy, functional urinary outcome, outcome prediction, lower urinary tract symptoms,

M16

Oncologic outcome of high risk and locally advanced prostate cancer after radical prostatectomy

Y Heiniger; A von Kempis; B Förster; H John
Kantonsspital Winterthur

Introduction: Novel studies have completely changed the therapeutic landscape of high-risk prostate cancer (PCa). While it seems clear that a multimodal approach should be taken, the trend goes towards radiotherapy combined with systemic therapies. In that context, the robot-assisted radical prostatectomy (RARP) loses importance. The **Aim** of this study was to investigate the oncologic outcome of patients with clinical high risk PCa corresponding EAU Guidelines who underwent RARP.

Methods: We reviewed all patients at our institution with at least one clinical high-risk feature, namely a Gleason score ≥8, a clinical Stage ≥ cT2, a PSA ≥ 20 ng/ml who received RARP as the primary modality between 2009 and 2017. Clinical staging was based on digital rectal examination; nodal staging is based on MRI- reports. The primary endpoint was overall survival (OS). The secondary endpoints were biochemical recurrence (BCR, PSA ≥ 0.2 ng/ml) and metastasis-free survival (MFS). We used Kaplan-Meier estimates and log-rank tests to assess their prognostic value.

Results: Overall, we included 254 patients with a median age of 66 years (interquartile range [IQR], 61-69). Medium PSA was 11.2ng/ml ([IQR] 5.3-13). During a median follow-up of 113 months ([IQR] 60-136) OS was 91% ([CI] 86-94) at 5 years and 77% ([CI] 70-82) at 10 years, respectively. 11% (n= 25) had distant metastasis. The 5y- and 10y-MFS was 92% and 87%, respectively. The 5y- and 10y BCR free survival was 70% and 56%, respectively. Among all patients, 27% (n=42) were treated with adjuvant hormone therapy or/and salvage radiotherapy.

Conclusion: In patients with clinical high-risk prostate cancer, multimodal therapy with primary radical prostatectomy provided metastasis-free survival in 9 of 10 patients within 10 years follow-up. Overall survival was 77% at ten years. Our **Results** emphasize that radical prostatectomy within a multimodal approach still resembles an adequate treatment option for well-selected patients with high-risk disease.

M17

Incidence and Surgical Repair of Postoperative Inguinal Hernias after Robot Assisted Radical Prostatectomy

L Sabbatini; C Padevit; H John
Kantonsspital Winterthur KSW

Background

Since robot assisted radical prostatectomy (RARP) was introduced in September 2002 in Switzerland, it has become the surgical standard in over 90% of the patients with prostate cancer in our country. The most common complications after radical prostatectomy are urinary incontinence and impotence 1. However, postoperative inguinal hernia (IH) development seems to be associated to radical prostatectomy. In this study we assessed the incidence and management of IH after RARP in our department.

Methods

From January 2013 to December 2019, 672 patients were included at our institution in this retrospective consecutive study. All patients were controlled in the outpatient clinic in a 4-year follow-up, as well were studied retrospectively using electronic medical records. The RARPs were performed by multiple surgeons. Intraoperative incidental hernia orifices were closed by a running suture of the fascial defect with a 3-0 barbed suture. Postoperative clinically relevant hernias were treated with a mesh repair according to Lichtenstein, avoiding a second intra- or extraperitoneal laparoscopic approach. Furthermore, a comparison to the incidence worldwide was performed.

Results

Our study shows that 46 out of 672 patients developed an inguinal hernia after RARP, which were subsequently repaired. The mean age in years of the cohort was 65.6 ± 6.7, the mean operative time in minutes was 211±58. In our institution, an incidence of 6.9% of IH after RARP was observed. Worldwide, incidence of inguinal hernias after RARP range from 5% to 20% 2.

Conclusion

Our study reveals an incidence of 6.9% of inguinal hernias after laparoscopic robotic- assisted radical prostatectomy, thus confirming the literature. The mechanism of inguinal hernia formation after RARP is not fully understood. Caudal shift of the rectovesical excavation and peritoneum or a stretched spermatic cord including the urethrovesical anastomosis, might result in a medial shift and tension of the internal inguinal ring, thus causing inguinal hernia 2. So far, the Lichtenstein repair is the gold standard for IH after radical prostatectomy and recommended by the international hernia guidelines 3. The open surgical Lichtenstein-repair is a safe and efficient technique to manage inguinal post-prostatectomy hernias.

M18

Prostatic Artery Embolization in Patients with Prostate Cancer: A Systematic Review

O Burkhardt[1]; D Abt[2]; DS Engeler[3]; H Schmid[3]; G Müllhaupt[4]; V Zumstein[3]
[1] Klinik für Urologie Kantonsspital St. Gallen; [2] Spitalzentrum Biel / Centre Hospitalier Bienne, Biel / Bienne, Switzerland; [3] Kantonsspital St. Gallen; [4] Spital Thun

Context:
Prostatic artery embolization (PAE) is increasingly performed worldwide for the treatment of lower urinary tract symptoms secondary to benign prostatic obstruction (LUTS/BPO). In contrast, the role of PAE in patients with prostate cancer (PCa) is unclear.

Objective:
This systematic review summarizes the current available literature on PAE in patients with PCa regarding oncological and functional outcome.

Evidence acquisition:
A systematic review was performed according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) recommendations. A structured search for the relevant literature from 1985 to 2022 was performed in Medline, Embase and York CRD. Risk of bias and confounding assessments were performed using the ROBINS-Tool.

Evidence synthesis:
Thirteen trials (twelve case series and one animal study using a canine model) were included in this systematic review. Four studies had a prospective study design. Risk of bias was rated moderate-to-serious in all of the studies.

Conclusion:
PAE in patients with PCa seems to be a safe procedure and effective regarding the improvement of LUTS. Despite PAE has been shown to be feasible in different treatment scenarios of localized or advanced PCa, the oncological benefits are debatable due to unreliable tumor response and a lack of controlled trials including long-term follow-up.

Patient Summary:
We investigated the literature to determine the role of prostatic artery embolization (PAE) in patients with prostate cancer (PCa) regarding oncological and functional outcomes. The Results suggest a similar safety profile and efficacy in terms of functional outcomes as earlier reported for PAE in patients with lower urinary tract symptoms due to benign prostatic hyperplasia. The role of PAE regarding oncological outcomes has to be further assessed.

M19

Prostatic artery embolization at the Cantonal Hospital St. Gallen: real-world outcomes and challenges of a multi-arm BPH registry

P Lyatoshinsky[1]; V Geisser[1]; M Pratsinis[1]; G Müllhaupt[2]; D Abt[3]; L Hechelhammer[4]; H Schmid[1]; D Engeler[1]
[1] Department of Urology, Institute for Medicine, University St. Gallen, St. Gallen, Switzerland; [2] Department of Urology, Spital Thun, Thun, Switzerland; [3] Department of Urology, Spitalzentrum Biel/Centre Hospitalier Bienne, Biel/Bienne, Switzerland; [4] Department of Radiology, Institute for Medicine, University St. Gallen, St. Gallen, Switzerland

Introduction

Prostatic artery embolization (PAE) remains under investigation in the recent 2023 EAU guidelines. Since July 2017 all patients with written consent, surgically treated for lower urinary tract symptoms/benign prostatic obstruction (LUTS/BPO) at Cantonal Hospital St. Gallen are enrolled in a prospective multi-arm BPH-registry. Patients that are enrolled in other prospective trials were not included to the registry. In this analysis we summarize real-world data of our prospective registry of the PAE treatment-arm.

Materials and Methods

All available data, including functional measures, International Prostate Symptom Score (IPSS) and other questionnaires, prostate volume, prostate specific antigen (PSA), and adverse events (AE) were collected before and during intervention, during hospitalization and follow-up (FU) visits scheduled at 6, 12 weeks, 6, 12, 24 and 60 months. We performed an analysis of the data focusing on functional outcomes, reintervention rates and AEs. The two-sided t-test and Wilcoxon test were performed for normally and clearly not normally distributed variables, respectively.

Results

From July 2017 until August 2022, 112 patients were enrolled for PAE. 65%, 60%, 41%, 49% and 28% participated in the 6, 12 weeks and 6, 12, 24 months follow-up, respectively. The 60 months follow-up was not included, as completed by only 2 patients so far. At a median follow-up time of 12 months, we could observe improvements of Qmax, postvoid residual urine (PVR) and detected a significant reduction in IPSS (baseline vs. 6,12 weeks and 6, 12 months, $p < 0,001$, $r = 0,60; 0,55; 0,51; 0,52$ respectively), nycturia (baseline vs. 6 weeks and 12 weeks, $p < 0,001$, $r = 0,40; 0,38$ respectively), prostate volume and PSA. Eight (7%) non serious AEs of maximum Grade II of Clavien-Dindo classification were reported. Five patients (4%) underwent re-interventions (TUR-P/Aquaablation) 6 weeks to 30 months after PAE.

Discussion and Conclusion

All available baseline and follow-up parameters were documented as completely as possible. Unfortunately a part of patients was lost to follow-up, as they were referred solely for the procedure. Therefore, the low rate of AEs and re-interventions must be interpreted with caution. In our real-world setting, we could detect improvement of Qmax, reduction of PVR, significant reduction of IPSS, nycturia, prostate volume and PSA, which is consistent with published controlled studies and meta-analysis.

P001

Diagnostic Validation of Real-World Prostate Cancer Screening Algorithms

K Hangartner; B Förster
KSW Kantonsspital Winterthur

Prostate cancer (PC) screening is controversial, and policy makers have proposed different screening algorithms including a variety of risk calculators based on literature review and expert opinion. Although many tools have been validated, the overall diagnostic accuracy of different screening algorithms including these tools are still unknown. Our **Objective** was to evaluate real-world screening algorithms and to assess their diagnostic performance for detecting clinically significant prostate cancer.

Mat. Met.
We included all patients of our prosp. maintained database who underwent targeted and systematic prostate fusion biopsy between 2015 and 2020 at our institution. Generally, patients had prostate-specific antigen (PSA) values ≥ 3 ng/ml and/or suspicious DRE, received multiparametric MRI and got biopsied if they had Prostate Imaging and Reporting Data System version 2 (PI-RADS v2) ≥ III lesions. We evaluated different PC screening algorithms including PSA density, MRI data, and the Rotterdam risk calculators based on digital-rectal examination and/or MRI. The diagnostic performance to detect clinically significant PC (International Society of Urological Path. ≥ 2) was examined by area under the curve (AUC), discrimination, calibration, and clinical net benefit.

Res.
Among 834 included patients with a median age of 65 years (IQR [interquartile range] 60 - 71), the median PSA and prostate volume was 7 ng/ml (IQR 5 - 10) and 49 ml (IQR 34 - 70), respectively. Overall, in 449 (53.8%) patients PC was detected and 281 (33.7 %) patients had clinically significant PC. The combination of PSA-density ≥ 0.15 with the Rotterdam risk calculator including MRI data provided the highest AUC (0.70, 95% CI 0.66 - 0.73) in comparison to the recommended screening algorithm of the EAU (0.67, 95% CI 0.64 - 0.7) and the Swe. Minist. of Health 0.63, 95% CI 0.60 - 0.66). In decision curve analysis, however, the latter two algorithms outperformed the other algorithms and improved the prediction among the crucial threshold probabilities between 0.15 and 0.25 by a maximum of 5%

Conc.
The algorithms of the EAU and the Swe. Minist. of Health offer the best diagnostic performance based on clinical variables to identify clinically significant PC and to avoid unnecessary prostate biopsies. There is a lack of diagnostic accuracy around crucial threshold probabilities. Policy makers should give clear recommendations, as certain algorithms degrade sign. in terms of diagnostic accuracy

P002

VISIONING - Evaluation of a purely MRI-based, opportunistic prostate cancer screening programme

M Matthias; C Wetterauer; H Püschel; A Deckart; L Bubendorf; DJ Winkel; D Boll; E Merkle; H Seifert; C Rentsch
Universitätsspital Basel

Introduction

The current literature indicates a superior diagnostic performance of prostate MRI as compared to PSA for prostate cancer (PCa) detection. Here we evaluated the implementation of biparametric MRI (bpMRI) of the prostate as a PSA-independent opportunistic screening tool.

Materials & Methods

The study (NCT03749993) included 241 biopsy-naïve participants older than 50 years, which underwent 3 Tesla bpMRI of the prostate, and a targeted biopsy was performed if a suspicious PI-RADS ≥ 3 was detected. After an interim analysis (n = 110), the study protocol was adjusted, and PI-RADS 3 lesions were re-assessed through a > 6-month follow-up MRI and only led to a biopsy if the lesion was persistent or upgraded to PI-RADS > 3. Template prostate biopsy in negative bpMRI was performed if digital rectal examination was suspicious or PSA > 10 ng/ml. The primary endpoint was to detect 20 clinically significant (ISUP ≥ II) PCa (csPCa).

Results

74/241 (30,7%) men were found to have suspicious PI-RADS lesions through bpMRI, and 75 participants underwent biopsy. PCa was detected in 27 individuals (36%). 7 /27 (25.9%) were clinically non-significant (ISUP I) PCa (cnsPCa) and 20 out of 27 (74.1%) csPCa. All 20 csPCa were detected by bpMRI, whereas using only PSA and DRE would have missed 50% (10 out of 20) of these cancers. The median PSA of the entire cohort was 1.26 ng/ml (IQR 0.73 – 2.88). The median PSA-density in the cohort with csPCa was 0.112 [0.076– 0.314]. No csPCa was detected in patients with PSA < 1ng/ml. So far, 12.1 bpMRIs were needed to detect 1 patient with csPCa. Follow-up of the patients with PIRADS III lesions (n = 10) has yet to be completed and will be presented at the congress.

Conclusions

Opportunistic screening using bpMRI as the primary screening tool demonstrates a high effectiveness in identifying patients with csPCa that would have been missed by traditional screening Methods, even at notably low levels of PSA and PSA-density. However, this approach also leads to the detection of cnsPCa in 25.9% and negative biopsies in 64% of participants. Omitting a bpMRI in patients with a PSA ≤ 1 ng/ml would have reduced the number of bpMRIs by 37.3% and negative biopsies by 39.6%, resulting so far in 7.6 bpMRIs and 2.8 targeted biopsies needed to detect 1 patient with csPCa. This promising effectiveness of bpMRI must be validated in larger cohorts of patients.

P003

Rechtliche Anforderungen an die molekulargenetische Sprech-stunde bei Prostatakarzinom-Patienten

T Scherer1; T Szucs2
1 Universitätsspital Zürich; 2 Universität Basel

Hintergrund
Mit dem Aufkommen von molekulargenetischen Tests zur Risikoklassifizierung und Subklassifizierung für konsequente Therapien von Prostatakarzinom-Patienten werden Urologen mit besonders schützenswerten Daten betraut. Es stellt sich die Frage, welche rechtlichen Bestimmun-gen Urologen vor der Durchführung einer molekulargenetischen Untersuchung in der Schweiz beachten müssen und welche Konsequenzen sich daraus für die Aufklärung der Patienten erge-ben. Auf dieser Basis wird ein Protokoll erarbeitet, das Grundlage für die Aufklärung von Prosta-takarzinom-Patienten vor der Durchführung eines molekulargenetischen Tests bilden kann.

Gesetzliche Grundlagen
Die molekulargenetischen Untersuchungen (somatische und Keimbahn Analysen) in der urologischen Sprechstunde werden primär in der Schweiz im Bundesgesetz über genetische Untersuchungen (GUMG) beim Menschen und in der Verordnung über genetische Untersuchungen beim Menschen (GUMV) gesetzlich geregelt. Letztere ist kürzlich am 1.12.2022 in Kraft gesetzt wor-den.

Aufklärung
Vor der Durchführung von präsymptomatischen Screeningtests bei familiärer Vorbelastung und/oder vorhandener somatischer, pathologischer Mutationen ist eine schriftliche Aufklärung zwingend notwendig. Darin muss auf die zukünftige Lagerung (DNA) und Weiterverwendung der genetischen Daten hingewiesen werden. Zusätzlich ist der Patient vorab über die anfallenden Kosten zu informieren. Im Falle eines Gesuchs um Kostenübernahme durch die obligatorische Krankenversicherung sollte zur Wahrung der Persönlichkeitsrechte der Angehörigen lediglich der Verwandtschaftsgrad angegeben und auf die Nennung der Namen der Familienangehörigen verzichtet werden. Weiter muss vor dem Test die Handhabung von Überschussinformationen, wel-che für den Patienten und die Angehörigen zum jetzigen Zeitpunkt oder in Zukunft gesundheitli-che Konsequenzen haben können, mit dem Patienten besprochen werden. Dabei ist der Patient hinsichtlich des Rechts auf Nichtwissen und in Bezug auf Überschussinformationen zu informie-ren.

Schlussfolgerung
Vor der Durchführung einer genetischen Untersuchung besteht eine ausführliche Aufklärungs-pflicht, ähnlich der Aufklärungspflicht vor einer urologischen Operation. Aufgrund der poten**Ziel**l grossen Tragweite von genetischen Informationen nicht nur für den Patienten an sich, sondern auch für dessen Familienangehörige, ist die Aufklärung vor genetischen Untersuchungen beson-ders wichtig und entsprechend sorgfältig durchzuführen.

P004

First experiences and Results after Introduction of Stockholm-3-Test in clinical practice at a tertiary academic university hospital

M Karrer; F Schmid; C Poyet; D Eberli
Department of Urology, University Hospital Zurich, Frauenklinikstrasse 10, 8091 Zurich

Background & **Aim**s: The European Randomized Study of Screening for Prostate Cancer (ERSPC) demonstrated that population-based PSA screening followed by prostate biopsy can reduce prostate cancer mortality. However, PSA testing as a screening tool for early detection of prostate cancer (PCa) also leads to adverse outcomes. Therefore, the scientific community is striving to find additional biomarkers for men with elevated PSA levels. The Stockholm3 (SH3) test combines clinical information, protein measurements, and a genetic score to estimate PCa risk. Beginning of 10/2022 our clinic was able to indroduce SH3 test in our outpatient clinic for men during possible PCa work-up. The Aim of this work is to present our first experiences and Results with the SH3 test.

Material & Methods: All men underwent an initial urological assessment. According to the manufactures protocol SH3 could only be used when the following conditions were present: 45-75 years, PSA ≥ 1.5 ng/ml and no previous PCa diagnosis. The blood sample shipped to Uppsala Sweden for analysis. Patientinformations, MRI and biopsy Results for significant PCa were recorded if available. The Results of SH3 was presented by the company as a SH3 risk score ranging from 0-100% with 0-10% referring to low & normal risk and >10% to increased risk.

Results: A total of 26 men were additionally tested with the SH3-test for PCa-work-up. Median age of the group was 66 (Interquartile Range (IQR) 53-75), median PSA 6.12 ng/ml (IQR 1.69-13.15 ng/ml) and in 25 (96 %) men an additionally MRI was available and 2 were subsequently diagnosed with significant PCa. SH3 test was available for all tested men and showed a median risk score of 17 % (IQR 5-52 %) with 11 showing low & normal risk and 15 showed increased risk. In the increased risk group, 71% of the men had a positive MRI, but PCa was detected in only 29% of the men, and only 1 out of 4 positive biopsies showed significant PCa. The low-risk group included 11 men, all of whom received an MRI and 3 men had a biopsy. PCa was detected in 2 out of the 3 biopsies. In 3 men, no biopsy was performed despite an elevated PSA level and PIRADS-4 lesion because of the low and normal risk scores of the SH3 test.

Conclusion: As expected a large variation of SH3 risk score was observed in our first 26 tested men. SH3 low risk **Results** might have the potential to avoid MRIs and biopsies in our center, However more men have to be tested before any stronger **Conclusions** can be drawn

P005

Is the quality performance of the radiologist and MRI could ameliorate the diagnostic accuracy of prostate fusion-guided targeted biopsy in the detection of prostate cancer?

M Martins[1]; G Wirth[2]; J Hauser[3]; C Carera[3]; A Caviezel[3]; N Fleury[3]; Y Chollet[3]; S Rohner[3]; Y Tuchschmid[3]; T Gross[3]; G Verzotti[3]; JE Lalive[3]; C Treuthardt[4]; C Rochat[2]; G Mayor[2]; T Sao-Nam[3]; G Altwegg[3]; J Klein[3]; G De Boccard[2]; Y Vlamopoulos[3]; A De Gorski[3]; A Bitton[3]; A Mottaz[4]; F Schoofs[3]; C Hugonnet[3]; C Iselin[3]; S Mc Adam-Gampert[3]; V Fenner[5]; A Marti[3]; J Renard[3]; S Regusci[3]
[1] Imagerive/SIPC; [2] CUGB - Générale Beaulieu; [3] Indépendant; [4] Centre Lémanique d'Urologie; [5] Hopital LaTour

Purpose: To evaluate the diagnostic accuracy of multiparametric magnetic resonance imaging (mpMRI) followed by mpMRI-guided transperineal or transrectal fusion biopsy for the detection of prostate cancer.

Materials and Methods: Analysis of a prospective cohort of 406 men between January 2021 and 2023 who underwent 3 Tesla mpMRI without endorectal coil followed by Uronav or Koelis fusion biopsies. MRI interpretation according to Pirads v2 and target delimitation was systematically performed by the lead author, including for MRIs performed in outside institutions. Biopsy technique and additional randomized biopsies were done at the urologist's discretion.
Any Gleason 3+3 or more was defined as clinically significant prostate cancer. The PIRADS classification in the multiparametric magnetic resonance imaging was correlated with the pathologic Results of biopsy using the McNemar test.

Results: We obtained a predictive positive value high for PIRADS 5 and PIRADS 4 (93%), a sensitivity of 72% for PIRADS 5, and 60 % for PIRADS 4. Concerning PIRADS 3 we obtained a concordant result of 81%VPP and sensitivity of 46%. Of 406 patients, 38 were without a suspicious lesion on multiparametric magnetic resonance imaging only 4% were found to have clinically significant prostate cancer on transperineal template saturation prostate biopsy.

Conclusions: We obtained an excellent concordance when we correlate MRI and pathologic **Results**. Using one central radiologist with a good quality of image the performance of the prostate cancer increased. The intercantonal networking and the multidisciplinary weekly meeting improve the confidence of the team. Multiparametric magnetic resonance imaging remains crucial in the diagnostic pathway of prostate cancer.

P006

A multi-centre study to assess the impact of MRI for detection of aggressive prostate cancer in men on active surveillance using the PRECISE criteria

F Vaccaro[1]; F Giganti[2]; A Stabile[3]; R Leni[4]; M Emberton[5]; CM Moore[5]; V Kasivisvanathan[5]; M Valerio[6]
[1] Hôpitaux Universitaires de Geneve (HUG); [2] University College London Hospitals NHS Foundation Trust; [3] University College London (UCL); [4] San Raffaele Hospital; [5] University College London Hospital; [6] HUG Hôpitaux Universitaires de Genève

Introduction & **Objective**s

Serial multiparametric magnetic resonance (mpMRI) for active surveillance (AS) in prostate cancer has been increasingly adopted over the last decade. AS programmes vary across the world, with different timings for follow-up imaging and biopsy. The PRECISE recommendations evaluate the radiological change on serial imaging using a 1-to-5 scale in which PRECISE 1 or 2 denote radiological regression, PRECISE 3 indicates stability and PRECISE 4 or 5 imply progression. We present our data for the validation of the PRECISE
scoring system as a tool to predict disease progression in a multicentre international setting.

Materials & Methods

We collected data from 22 centres across the world and applied two entry criteria: i) at least 2 MR scans (baseline and follow-up); ii) at least 2 biopsies (baseline and follow-up, the latter after the 2nd scan). Local radiologists reported the scans using PRECISE. Histological progression was deVned as any increase in Gleason Score from baseline. Progression free survival (PFS) was estimated using Kaplan-Meier curves with landmark time starting from date of 1st follow-up MRI and multivariable Cox proportional hazards model tested the predictive role of PRECISE.

Results

A total of 1,556 patients were included, 1389 (89%) of which had Gleason 3+3 and 167 (11%) had Gleason ≥ 3+4 at baseline. Median follow-up was 48 months, and 513 (33%) patients experienced histological progression. The overall 5- and 10-year progression-free survival rates were 66% and 41%, with time starting at diagnosis. For PRECISE 1-2 (n=158), PFS was 88% at 2 years from Vrst follow-up MRI and 77% at 5 years, while for PRECISE 4-5 (n=413), PFS was 52% and 35%. In PRECISE 3 [stability] and visible lesions
(n=597), 2- and 5-year PFS was 76% and 50%. In PRECISE 3 [stability] and non-visible lesions (n=388), PFS was similar to PRECISE 1-2 (2- and 5-year PFS: 91% and 80%) (Log Rank $p < 0.001$). At multivariable analysis, PRECISE 4-5 remained an independent predictor of histological progression (HR 2.63; $p < 0.0001$).

Conclusions

Our study has validated a dedicated MRI-based scoring system to assess disease progression during AS and could contribute to the creation of a risk model that incorporates both clinical and radiological data to fully benefit from prostate MRI and targeted biopsies.

P007

Focal high-intensity focused ultrasound therapy for localized prostate cancer: Results of the multinational FASST registry

A Ebner1; S Ladjevardi2; A Femic2; N Hübner3; M Häggmann2; L Hefermehl1
1 Kantonsspital Baden; 2 University Hospital Uppsala; 3 AKH Vienna

Introduction and **Objective**s: The global incidence of prostate cancer (PCa) is rising steadily. In selected patients with localized PCa high-intensity focused ultrasound (HIFU) therapy represents as a minimally invasive and safe therapeutic approach. Yet, clinical risk factors of treatment failure (TF) are insufficiently defined. Herein, we **Aim**ed to identify independent predictors of TF following HIFU therapy in prospectively recruited PCa patients.

Materials and Methods: Consecutive patients with localized, unilateral and low- or intermediate-risk PCa (ISUP I-III) subjected to HIFU therapy (Sonablate, SonaCare, USA) were prospectively recruited in the FASST registry, a multinational effort involving experienced HIFU centres across Austria, Sweden and Switzerland. All patients had regular follow-up visits with PSA testing as well as targeted and systematic prostate biopsy after multiparametric MRI. The primary endpoint was TF, defined as histologically confirmed tumour that required salvage treatment or androgen deprivation. Crude and multi-variable adjusted hazard ratios (HR) were calculated using Cox proportional hazard regression models.

Results: Until August 2022, a total of 154 consecutive patients were recruited in the multinational FASST registry. These patients had a mean age of 65 years (SD, ± 7) and the majority presented as ISUP grade 2 (grade 1, 14%; 2, 62%, and 3, 24%) and T stage 1 (T1, 71% and T2, 29%). At baseline, mean pre-interventional PSA was 6.2 ng/ml (4.0 - 8.6), and prostate volume was 37 ml (28 - 46). Cores taken at initial biopsy averaged 10 (4 - 14), of which 3 (2 - 4) were positive. A total of 16 (16%) TFs occurred during a median follow-up of 12 months (IQR, 12-20). Of all 20 clinical and biochemical features available at the time of initial hospital admission, only T stage and the number of positive cores at the first biopsy were associated with TF after HIFU therapy [HR, 95% CI, 2.99 (1.38 - 6.48), p = 0.005, and 1.38 (1.02 - 1.85), p = 0.037, respectively]. In multivariable-adjusted analysis, only T stage evolved as an independent predictor of TF [HR, 95% CI, 5.57 (1.52 - 20.32), p = 0.009].

Conclusion: Among contemporary patients treated with HIFU therapy for low- to intermediate-risk PC, initial T stage represents a clinically feasible and cost-effective determinant of TF.

P008

Bounce-Effekt oder Lokalrezidiv nach LDR-Brachytherapie der Prostata? Wenn die PSMA-PET CT falsch positiv ist

T Rozsos1; P Lyatoshinsky2; DS Engeler3; H Schmid3; C Schwab3
1 Kantonsspital St.Gallen; 2 Kanonsspital St.Gallen; 3 Kantonspital St Gallen

Hintergrund und Ziele
Bei low- und intermediate-risk Prostatakarzinom wird heutzutage als minimalinvasive Möglichkeit die LDR-Brachytherapie (BT) zur Behandlung des Tumors eingesetzt. In 30% der mittels BT behandelten Patienten kommt es rund 1 bis 1.5 Jahre postoperativ zu einem Bounce-Phänomen, einem bisher weiterhin nicht ganz verstandenen Phänomen eines PSA-Anstieges, gefolgt von einem erneuten PSA-Abfall. Dieses Phänomen stellte sich als ein prognostisch günstiger Faktor heraus. Bislang ist nichts bekannt über eine mögliche falsch positive PSMA-PET-CT i.R. eines Bounce-Phänomens bzw. in der Literatur nicht beschrieben.Das **Ziel** dieser Präsentation ist die Optimierung der Nachkontrolle und Diskussion der PSMA-PET-CT, deren Wertigkeit im Rahmen eines Falles mit Bounce-Phänom diskutiert werden soll.

Fallbeschreibung
In unserem Fall hatte der Patient ca. 9 Monate nach stattgehabter BT einen Nadir vom 1.37 µg/l erreicht. 21 Monate postoperativ entwickelte der Patient einen PSA-Anstieg bis 4,16 µg/l, sodass extern eine PSMA-PET-CT-Untersuchung durchgeführt wurde. Hierbei zeigte sich eine PSMA-avide Läsion der Prostata und somit der Verdacht auf ein Lokalrezidiv. Es erfolgte die Zuweisung zur Salvage-Therapie. Die Kontrolle des PSA Wertes ergab jedoch einen gesunkenen Wert von 3.75 µg/l, resp. 2 Monate später 2.68 µg/l. Die PSA Kinetik sowie der Zeitpunkt der intermittierenden PSA-Erhöhung postoperativ sprachen somit klar für ein Bounce-Phänomen und nicht für ein Rezidiv, sodass eine weiterfolgende Therapie vermieden werden konnte.

Schlussfolgerung
Unser Patientenfall zeigt eine weitere und bislang unbekannte Möglichkeit eines falsch positiven PSMA-PET-CT Befundes i.R. eines Bounce-Phänomens nach BT der Prostata. Eine einfache PSA-Kontrolle konnte den Verdacht auf ein Lokalrezidiv entkräften.
Die Wertigkeit des PSMA-PET-CT zur Detektion von Metastasen postoperativ ist ohne Zweifel gegeben, hingegen muss die Interpretation des Lokalbefundes mit Vorsicht erfolgen.

P009

Nerve-sparing and health-related quality of life outcomes in robot assisted radical prostatectomy

A Gopalakrishnan; C Iselin; M Valerio; O Windisch
HUG Hôpitaux Universitaires de Genève

Background: Nerve sparing surgery (NSS) is typically envisaged in sexually active patients whenever feasible. Whether NSS should be always attempted in patients to maintain urinary continence and quality of life is a matter of **Discussion**.

Objectives: to determine the short-term (3 months) and long-term (36 months) effect of NSS on patient-reported outcome measures (PROMs).

Materials and Methods: Retrospective study in a tertiary care center including consecutive patients who underwent robot-assisted radical prostatectomy between January 2014 and December 2020. Validated PROMs (IPSS, IIEF-5, ICS, global quality of life, number of pads during day and night) were prospectively collected at 0, 3, 6, 12, 24, and 36 months. Patients requiring 0-1 daily pad were considered continent.

Results: 469 patients were included. NSS was not performed (No-S) in 128 (27.3%) patients, unilateral (U-S) in 137 (29.2%) patients, and bilateral (B-S) in 204 (43.5%) patients. PROMs response rate was 48.1% to 63.7% during follow-up.
Continence was achieved in 76% of patients at 3 months, 89% at 6 months, and rose steadily above 90% after 12 months. Comparing No-S to U-S and B-S, self-reported continence measured by ICS-1 was worse at 3, 6, and 36 months (7.4 vs. 6.4 vs. 4.8, p=0.001; 5.1 vs. 4.5 vs. 3.3, p=0.01; 3.1 vs. 3.0 vs. 1.9, p=0.03). A short and long-term significant reduction in daily pads use was seen with NSS compared to No-S, with the least use in B-S.
IPSS score was better at 3 months for B-S compared to No-S and U-S (7.3 vs. 9.3 vs. 9.7, p=0.02) but not in subsequent follow-up. Overall quality of life status did not differ significantly between groups during the follow-up period.
Erectile function (IIEF-5) differed significantly among groups and was worse for the No-S and U-S groups compared to the B-S group at each follow-up interval (2.3 vs. 3.7 vs. 6.3, $p < 0.001$; 3.1 vs. 6.8 vs. 11.3, $p < 0.001$ at 3, and 36 months respectively). While the use of IPDE-5 was highest in the B-S group, consumption decreased during the follow-up in all groups, and was accompanied by an improvement in erectile function.

Conclusion: Our study confirms that in addition to better sexual recovery, the extent of NSS provides a consistent positive impact over continence recovery regardless of the PROM employed. NSS should be considered beyond the sole **Objective** of erectile function preservation as long as the oncological outcome is not compromised.

P010

Same day discharge for robot-assisted radical prostatectomy: a prospective cohort study documenting an Australian approach

F Kaufmann; M Furrer
Solothurnr Spitäler AG

Background: The **Introduction** of robotic surgical systems has significantly impacted urological surgery, arguably more so than other surgical disciplines. The focus of our study was length of hospital stay - patients have traditionally been discharged day 1 post-robot-assisted radical prostatectomy (RARP), however, during the ongoing COVID-19 pandemic and consequential resource limitations, our centre has facilitated a cohort of same-day discharges with initial success.

Methods: We conducted a prospective tertiary single-centre cohort study of a series of all patients (n = 28) - undergoing RARP between January and April 2021. All patients were considered for a day zero discharge pathway which consisted of strict inclusion criteria. At follow-up, each patient's perspective on their experience was assessed using a validated post-operative satisfaction questionnaire. Data were reviewed retrospectively for all those undergoing RARP over the study period, with day zero patients compared to overnight patients.

Results: Overall, 28 patients 20 (71%) fulfilled the Objective criteria for day zero discharge. Eleven patients (55%) agreed pre-operatively to day zero discharge and all were successfully discharged on the same day as their procedure. There was no statistically significant difference in age, BMI, ASA, Charlson score or disease volume. All patients indicated a high level of satisfaction with their procedure. Median time from completion of surgery to discharge was 426 min (7.1 h) in the day zero discharge cohort.

Conclusion: Day zero discharge for RARP appears to deliver high satisfaction, oncological and safety outcomes. Therefore, our study demonstrates early success with unsupported same-day discharge in carefully selected and pre-counselled patients.

P011

Reasons for rejection of adjuvant radiotherapy following radical prostatectomy: a systematic survey

S Sigg; W Arnold; A Mattei; C Würnschimmel
Luzerner Kantonsspital (LUKS)

Background

Multidisciplinary case **Discussion**s (MCD) in oncological patients increase the quality of care for cancer patients. Specifically, for patients after radical prostatectomy (RP), deviaton from MCD-recommended adjuvant radiotherapy is associated with worse oncological outcome and the adherence rate has been shown to be as low as 55% (1). The primary **Aim** of this study was to collect individual factors contributing to rejection in these patients and propose potential strategies for improvement.

Materials and Methods

We conducted a retrospective cohort-study of patients who received a MCD recommendation for adjuvant radiotherapy after RP based on adverse tumor features such as ≥pT3, positive resection margins (R1), high Gleason Grade Group (≥4) and/or nodal positivity (pN1) at our institution between 2014 - 2022. A systematic quantitative and qualitative survey was conducted via telephone to assess patients' baseline characteristics, socioeconomic status, individual reasons for and against immediate adjuvant therapy, and their understanding of the MCD recommendation and tumor situation.

Results

Overall, 735 patients received both a RP and were documented in the MCD-database, thus eligible for analysis. Evaluation of adjuvant RT after RP was recommended in 47 patients (6.4%). The median age was 65 years (IQR: 59-69), and 89% of the men received a pelvic lymph node dissection. Adverse tumor characteristics consisted of pT3 in 41 (87%), pN1 in 24 (51%), Gleason Grade Group ≥4 in 17 (36%) and R1 in 35 (75%) men. Until 2022, 17 out of 47 of these patients did either not receive this therapy at all or only in a deferred setting resulting in a rejection-rate of 36%. The **Results** of the systematic survey are being collected and expected to be completed until 07/2023.

Conclusions

Rejection of adjuvant RT following RP is likely influenced by multiple factors that require further investigation. To address this issue, it is crucial to implement comprehensive structures that ensure patients are well-informed about their MCD recommendation, receive evidence-based, multidisciplinary counseling, and understand the potential risks associated with non-adherence. Identifying and addressing these factors can potentially improve adherence rates and enhance patient outcomes.

Literature

(1) Knipper et al.: Impact of Adherence to Multidisciplinary Recommendations for Adjuvant Treatment in Radical Prostatectomy. Clin Genitourin Cancer 2020.

P012

Spindle cell/pleomorphic lipoma of the seminal vesicle: First description of a rare benign mesenchymal tumor

P Lyatoshinsky1; M Pratsinis1; E Markert2; D Engeler1; H Schmid1; G Müllhaupt3
1 Department of Urology, Institute for Medicine, University St. Gallen, St. Gallen, Switzerland; 2 Department of Pathology, Institute for Medicine, University St. Gallen, St. Gallen, Switzerland; 3 Department of Urology, Spital Thun, Thun, Switzerland

Introduction
Mesenchymal tumors of the urinary tract are rare entities. To our knowledge, benign lipomatous tumors of the seminal vesicle have not been previously reported in the literature. We report a case of spindle cell/pleomorphic lipoma of the seminal vesicle.

Case Presentation
A 6.2 x 5.1 cm tumor originating from the left seminal vesicle (SV) was incidentally detected in a 79-year old male on computed tomography (CT) performed for peripheral vascular disease. On subsequent magnetic resonance imaging (MRI) of the pelvis, the mass showed contrast-enhanced lipomatous and solid areas, suggestive of a sarcomatoid mass with a differential diagnosis of liposarcoma. Despite negative TRUS biopsy we decided to proceed with a robotic vesiculectomy. Intraoperatively, the tumor was enucleated from the seminal vesicle, with an uncomplicated postoperative course. Histopathological evaluation revealed an encapsulated, 7 x 6 x6 cm lipomatous tumor. Considering the negative MDM2 FISH result from the final specimen and the previous biopsy the histopathological findings were most consistent with a spindle cell/pleomorphic lipoma. No evidence of malignancy was found.
Six weeks after surgery the patient presented in good general condition with preserved ejaculatory function, despite diminished ejaculatory volume.

Discussion
Primary tumors of the seminal vesicles are very rare. The most common entities are malignant epithelial tumors of the seminal vesicle in the form of adenocarcinomas. Histologically, epithelial tumors must be distinguished from mesenchymal ones, such as the lipoma described. We performed a literature search in PUBMED for primary mesenchymal tumors of the seminal vesicles and found 70 cases, of which 46% were benign.
The work-up of a mass arising from the seminal vesicles is challenging due to the heterogeneous entities as well as lack of clear radiological features of malignancy. For this reason, the masses are surgically excised, even in cases of negative biopsies, as in ours.

Conclusion
Lipomas of the genitourinary tract have occurred mainly in the spermatic cord, very rarely in the urinary bladder, and in the upper urinary tract, penis, and scrotum. To our knowledge, this is the first description of a spindle cell/pleomorphic lipoma of the seminal vesicle as a primary benign mesenchymal tumor of the seminal vesicle.

P013

Carcinome adénoïde kystique/carcinome à cellule basale de la prostate : A propos d'un cas

A Scherz-Moussa Youma1; M Grämiger2; D Nguyen2
1 Réseau Hospitalier Neuchâtelois (RHNe); 2 rHNE

Introduction : Le carcinome adénoïde kystique/carcinome à cellule basale (ACC, BCC) de la prostate est une tumeur maligne très rare composée de cellules basales de la prostate avec un comportement incertain. Le premier cas de BCC prostatique a été publié en 1974 et une centaine de cas ont été décrits à ce jour. L'âge de découverte est de 28 à 97 ans avec un pic entre 60 et 75 ans. Le diagnostic est le plus souvent de découverte fortuite après une résection transurétrale de la prostate pour des symptômes d'obstruction des voies urinaires. Nous rapportons ici un cas de BCC de la prostate qui a été diagnostiqué à un stade précoce et traité par une prostatectomie radicale.

Présentation du cas : Patient de 63 ans connu pour un status après résection d'un diverticule de la vessie par mini-laparotomie. Au vu la grande taille du diverticule et des troubles de la vidange vésicale une résection transurétrale de la prostate a été discutée avec le patient. Le toucher rectal est non suspect et la valeur de PSA est de 1.35 u/l (normal < 4u/l).Suite à l'intervention l'examen histologique montre une prolifération glandulaire irrégulière acribriforme suggestive de carcinome adénoïde kystique à cellules basales de la prostate, positive pour CK5/6, BCL2, P63 et CK7. Le bilan d'extension ne révèle aucune lésion à distance. Le cas est discuté au tumorboard interdisciplinaire, ou l'indication à une prostatectomie radicale avec curage ganglionnaire est retenue. La pathologie définitive confirme le diagnostic avec des marges saines de résection, sans atteinte extracapsulaire ni ganglionnaire. Une radiothérapie adjuvante a été évoquée conformément aux aux données de la littérature. Dans l'immédiat, le patient présentant encore de discret troubles mictionnels, un suivi clinique et radiologique a été mis en place.

Discussion : Le BCC prostatique est composé de cellules basales prostatiques néoplasiques, qui se développe à partir des cellules épithéliales sécrétoires des canaux et des acini de la prostate. Certains cas de forte positivité pour BCL2 et Ki 67 ont été signalés. Le réarrangement du gène MYB n'a pas été détecté dans notre cas.
Conclusion : Le BBC prostatique est une entité agressive rare, souvent non évoquée au stade clinique ou radiologique en raison de son aspect peu spécifique. La prostatectomie radicale associée à une radiothérapie adjuvante est le meilleur choix de traitement.

P014

Health-related quality of life in patients with metastatic hormone-sensitive prostate cancer treated with androgen receptor signalling inhibitors: the role of combination treatment therapy

L Afferi[1]; C Carson[2]; M Longoni[3]; M Moschini[3]; G Gandaglia[3]; AK Morgans[4]; R Cathomas[5]; A Mattei[1]; A Breda[6]; RM Scarpa[7]; R Papalia[7]; C de Nunzio[8]; F Esperto[7]
[1] Department of Urology, Luzerner Kantonsspital, Lucerne, Switzerland ; [2] Luzerner Kantonsspital; [3] Department of Urology, Urological Research Institute, Vita-Salute University, San Raffaele Scientific Institute, Milan, Italy; [4] Dana-Farber Cancer Institute, Boston, MA, USA; [5] Department of Medical Oncology, Kantonsspital Graubünden, Chur, Switzerland; [6] Department of Urology, Fundacio Puigvert, Calle Cartagena 340/350, 08025 Barcelona, Spain; [7] Department of Urology, Campus Biomedico University of Rome, Rome, Italy; [8] Department of Urology, Sant'Andrea Hospital, Sapienza University, Rome, Italy

Objectives. While the addition of androgen receptor signalling inhibitors (ARSIs) to androgen deprivation therapy (ADT) Results in better of overall survival in patients with metastatic hormone-sensitive prostate cancer (mHSPC), information regarding health related quality of life (HR-QoL) is sparse. We **Aim**ed at summarizing current evidence on the impact of ARSIs on HR-QoL.

Materials and Methods. We performed a systematic review of the published literature on PubMed/EMBASE, Web of Science, SCOPUS, and the Cochrane libraries between January 2011 and April 2022. We included only phase III randomized controlled trials (RCT), which were selected according to the PRISMA guidelines. We Aimed at evaluating differences in HR-QoL, assessed by validated patient reported outcomes instruments. We analysed global scores and sub-domains such as sexual functioning, urinary symptoms, bowel symptoms, pain/fatigue, emotional and social/family wellbeing. We reported data descriptively.

Results. Six RCTs were included: two used enzalutamide with ADT as intervention arms (ARCHES, ENZAMET); one used apalutamide with ADT (TITAN); two abiraterone acetate and prednisone (AAP) with ADT (STAMPEDE, LATITUDE); and one darolutamide with ADT (ARASENS). Enzalutamide or AAP with ADT increase overall HR-QoL in comparison with ADT alone, ADT with first generation nonsteroideal anti-androgens or ADT with docetaxel, whereas apalutamide and darolutamide with ADT maintain HR-QoL similarly to ADT alone or ADT with docetaxel, respectively. Time to first deterioration of pain was longer with combination therapy with enzalutamide, AAP or darolutamide, but not with apalutamide. No worsening of emotional wellbeing was reported from the addition of ARSIs to ADT than ADT alone.

Conclusions. The addition of ARSIs to ADT in mHSPC tends to increase overall HR-QoL and prolong time to first deterioration of pain/fatigue compared with ADT alone, ADT with first generation nonsteroideal anti-androgens, and ADT with docetaxel. ARSIs show a complex interaction with remaining HR-QoL domains. We advocate a standardization of HR-QoL measurement and reporting to allow further comparisons.

P015

CASPR-2 Encephalitis bei Prostatakarzinom – Fallpräsentation und systematische Literaturübersicht

V Haldemann1; G Ineichen1; F Zubler2; G Thalmann1
1 Inselspital Bern, Switzerland; 2 Spitalzentrum Biel/Centre Hospitalier Bienne

Fall:
Ein 75-jähriger Patient zeigt im November 2020 eine Enzephalitis mit einer Insomnie sowie epileptische Anfälle. Die Antikörper gegen CASPR2 waren im Blut positiv. Der PSA-Wert zeigt sich bei 10,6 µg/L und Biopsien zeigten Prostatakarzinom Gleason score 4+5=9. Parallel zur Rituximab-Therapie, wird eine bilaterale pelvine Lymphadenektomie und radikale Prostatektomie, gefolgt von Strahlentherapie einer ossären Metastase im PSMA-PET/CT durchgeführt. Seitdem hat der Patient unter regressiven Dosen von Rituximab keine neurologischen Beschwerden gezeigt.

Material und Methoden / systematische Literaturübersicht:
Eine Literatursuche wurde in Pubmed mit den Bezeichnungen "Autoimmunenzephalitis", "Morvan Syndrom", "Prostatakarzinom" und "CASPR2" durchgeführt. Insgesamt wurden 4 Fälle mit dieser Kombination berichtet, aber es wurde keine onkologische Behandlung genannt1-3. In den meisten Studien zu Anti-CASPR2-Enzephalitis wurde kein spezifisches Screening für Prostatatumoren durchgeführt4.

Hintergrund und **Ziele**:
Die paraneoplastische Autoimmunenzephalitis ist auch heute noch nicht vollständig erforscht. Voltage-gated Kaliumkanäle (VGKC) sind potenzielle Ziele von Antikörpern, insbesondere durch verschiedene Adhäsionsmoleküle, darunter CASPR2 (contactin-associated protein-2). Diese Transmembrankanäle reagieren auf Änderungen der Spannung des Zellmembranpotentials und haben eine breite Expression im Nervensystem5. Das erklärt die verschiedenen Syndrome, die mit Anti-CASPR2-Antikörpern assoziiert sind: Limbische Enzephalitis, Morvan Syndrom und Neuromyotonie. Weil die meisten Patienten mit anti-CASPR2-Enzephalitis männlich und über 60 Jahre alt6 sind und aufgrund der Expression von CASPR2 im Urogenitaltrakt5,7 kann eine Assoziation mit dem Prostatakarzinom vermutet werden.

Schlussfolgerungen:
Wir beschreiben den Fall eines Patienten mit CASPR2-positiver autoimmuner Enzephalitis in Verbindung mit einem Prostatakarzinom. Es ist unseres Wissens der einzige Fall in der Literatur, der parallel mit der üblichen neurologischen Therapie, sowie einer onkologischen Betreuung inklusiv Operation behandelt wurde. Die vollständige neurologische Remission unterstützt den Wert einer kurativen Behandlung auch bei fortgeschrittenen neurologischen Symptomen. Dies stellt auch die Frage nach einem geeigneten onkologischen Screening bei diesen Enzephalitiden.

P016

Aquablation for lower urinary tract symptoms in men with benign prostatic hyperplasia - the St. Gallen experience

S Hagmann1; O Köhle1; D Abt2; G Müllhaupt3; H Schmid1; D Engeler1
1 Kantonsspital St. Gallen; 2 Spitalzentrum Biel; 3 Spital Thun

Background and **Aim**s: In this prospective single center cohort study we report the outcome of Aquablation for the treatment of men with lower urinary tract symptoms related to benign prostatic hyperplasia at our institution.

Materials and Methods: We prospectively recorded International Prostate Symptom Score (IPSS), Quality of Life (QoL), and urodynamic parameters, as well as International Index of Erectile Function (IIEF) and Male Sexual Health Questionnaire (MSHQ) and occurrence of any adverse events. Baseline, peri-operative, 6 and 12 weeks, 6, 12 and 24 months data were collected.

Results:
A total of 73 patients with a mean age of 62 years (range 51-86 years) received Aquablation therapy from September 2019 to August 2022. The mean prostate volume was 68.5ml. Mean total operative time was 58.4min (SD 19.6min), mean first and second resection time was 3.2 and 3.0min respectively (SD 0.95 and 0.94min). Bipolar hemostasis was performed in 68 patients.
Mean baseline urodynamic parameters of Qmax of 9.8 ml/s (SD 4.4ml/s), Qmean of 4.4 ml/s (SD 1.9ml/s) and PVR of 128 ml (SD 131.7ml) significantly improved immediately after removal of the catheter with a mean Qmax of 20.4ml/s (SD 8.9ml/s), Qmean of 7.2 ml/s (SD 2.8ml/s), PVR of 39.7 ml (SD 39.7ml) ($p = < 0.0001$, $p=0.003$ and $p=0.00039$ respectively). The mean IPSS and QoL score significantly improved from 18.6 to 9.7 points ($p=0.004$) and 4 to 1.6 pts ($p=0.005$) after 3 months.
No significant changes in MSHQ and IIEF score were observed postoperatively after 3 months.
Two Clavien-Dindo grade I (vasovagal collapse, macrohematuria), one grade II (urinary frequency), and five grade III adverse events (urinary retention due to avital tissue, bladder tamponade, NSTEMI, postoperative hemorrhage, meatal stenosis) were observed.

Conclusion: Our study provides further evidence to support the use of Aquablation as an effective treatment option for patients with BPH. Further long-term Results are needed.

P017

Comparing Traditional Outcome Measures and Self-Assessed Goal Achievement in Patients Treated Surgically for Benign Prostatic Hyperplasia

M Pratsinis[1]; G Müllhaupt[2]; S Güsewell[3]; P Betschart[4]; V Zumstein[5]; D Engeler[1]; H Schmid[1]; A Lamb[6]; D Abt[7]
[1] Kantonsspital St. Gallen, Klinik für Urologie; [2] Spital Thun, Klinik für Urologie; [3] Kantonsspital St. Gallen, Clinical Trials Unit; [4] Klinik Stephanshorn, Urologie am Stephanshorn; [5] Urologie Zug; [6] Nuffield Department of Surgical Sciences, University of Oxford; [7] Centre hospitalier Bienne/Spitalzentrum Biel, Klinik für Urologie

Aim: Recently, a multitude of novel treatment options for men suffering from lower urinary tract symptoms (LUTS) due to benign prostatic hyperplasia (BPH) have been introduced. Current research often compares treatments using peak urinary flow rate (Qmax), post-void residual urine (PVR) and the International Prostate Symptom Score (IPSS). The role of physician-directed outcome measures has recently been challenged by the advent of patient-reported outcome measures. The **Aim** of this study is to provide a direct comparison of these traditional outcomes and self-assessed goal achievement (SAGA) and satisfaction with the procedure in patients treated with different modalities for LUTS/BPH.

Patients and Methods: Patients requiring surgical/interventional treatment for LUTS were enrolled in a prospective cohort, with assessment of individual goals at baseline. Follow-up was performed six to twelve weeks after treatment and included SAGA and satisfaction with the procedure as well as Qmax, PVR and IPSS. Statistical analysis was performed to assess the correlation between the different outcomes.

Results: Sixty-eight patients completed the goal formulation at baseline. At follow-up SAGA and satisfaction with the procedure were significantly correlated (Spearman rank correlation rho = 0.78, $p < 0.001$). There was a statistically significant correlation between IPSS and SAGA (rho = -0.70, $p < 0.001$) as well as IPSS and satisfaction with the procedure (rho = -0.52, $p < 0.001$). There was no statistically significant correlation between SAGA and Qmax (rho = 0.20, $p = 0.31$) or PVR (rho = 0.27, $p = 0.07$) nor between satisfaction with the procedure and Qmax (rho = 0.19, $p = 0.32$) or PVR (rho = 0.08, $p = 0.58$).

Conclusions: This study demonstrates a significant correlation of SAGA and satisfaction with the procedure and IPSS, while failing to demonstrate a correlation of SAGA and satisfaction with the procedure and Qmax or PVR. These findings highlight the value of patient-reported outcome measures and further support the inclusion of self-assessed goal achievement in clinical practice and comparative LUTS/BPH research.

P018

Proposal and Validation of a Perioperative Algorithm to Improve Antimicrobial Stewardship in Urethroplasty Patients

B Kranzbühler1; P Marks2; TA Ludwig2; L Kühnke2; F König2; S Riechardt2; R Dahlem2; M Fisch2; M Vetterlein2
1 UniversitätsSpital Zürich; 2 Universitätsklinikum Hamburg-Eppendorf (UKE)

Introduction:
Given the limited evidence on rational antibiotic stewardshiop (ABS) programs in urethral reconstruction, we **Aim**ed to introduce a standardized algorithm for perioperative ABS and to investigate the effect of such distinct measures on immediate, short-term, and long-term outcomes after one-stage substitution urethroplasty. We hypothesized that infectious complications and stricture recurrence in patients with nonsterile urine at the time of surgery may be mitigated by strict adherence to an ABS algorithm.

Methods:
Urethral surgery patients are subjected to our standard operating procedure for perioperative urinalysis (UA) and antimicrobial treatment. We performed an analysis of men undergoing ventral onlay bulbar 1-stage substitution urethroplasty between 2009-2016. Patients were stratified by urine culture (UCx) result on preoperative day (sterile versus nonsterile). Quantitative and qualitative exploration of UA and UCxs was performed. The ability of our standardized algorithm to decrease the proportion of positive UCxs over the perioperative course was tested by bivariate analyses. 21-day infectious complications (wound/urinary tract) and functional recurrence were defined as endpoints and Kaplan-Meier curves were estimated to compare recurrence-free survival between the groups.

Results:
Of 374 men with available data, 305 (62 %) had a sterile and 188 (38 %) a nonsterile preoperative UCx-2. In patients with nonsterile UCx-2, gram-positive cocci (63%) and enterobacteriaceae (24%) were the most frequent microbes. Of 205 patients with preoperative normal UA, 56 (27%) had a nonsterile preoperative UCx-2. Through a strict antimicrobial protocol with culture-specific therapy in case of positive UCx findings, the proportion of nonsterile UCx decreased to 18% at postoperative day 2 (UCx-3), there was no difference in 21-day infectious complications in men with sterile vs. nonsterile UCx-2 and Kaplan-Meier curves revealed no difference in recurrence between the two treatment groups at a median follow-up of 29 mo ($p = 0.4$).

Conclusions:
This study first described and evaluated a standardized ABS-based algorithm for reconstructive urethral surgery. We could successfully implement this perioperative urinary testing and treatment pattern to reduce unnecessary and untargeted antibiotic treatment in patients undergoing urethroplasty. The proposed algorithm proved efficacy without impairment of postoperative surgical outcomes.

P019

LONG-TERM (10-YEAR) SUCCESS OF DORSAL ONLAY GRAFT URETHROPLASTY FOR BULBAR URETHRAL STRICTURES

J Santos1; A Germanou1; M Valerio1; V Fenner2; C Iselin1; O Windisch1
1 HUG Hôpitaux Universitaires de Genève; 2 Hopital de la Tour

Purpose

Current literature regarding long-term success of urethroplasty is scarce. Our goal was to evaluate the long-term efficacy of dorsal onlay graft (DOG) urethroplasty in patients with at least 10 years follow-up in a specialized centre.

Methods

Monocentric retrospective study of patients who underwent bulbar DOG urethroplasty between 1998 to 2013, either with oral mucosa graft (OMG) or penile skin graft (PS). Exclusion criteria were lichen sclerosus, prior hypospadias repair, penile and posterior strictures. The primary outcome was the success rate, defined as the absence of recurrence requiring any subsequent surgical intervention or urethral dilation). Survival analyses were conducted using Kaplan-Meier's **Method** and Cox regression.

Results

76 patients meeting the inclusion criteria were identified. Median age was 59,5 years (+/- 14,4). Mean stricture length was 4.4 (+/-1,9) cm. Stricture aetiology was iatrogenic in 52 patients (68,4 %), unknown in 21 patients (27,6 %), and post-infectious in 3 patients (3,9 %). 56 patients (73,6 %) had prior urethral surgery or dilatation. Mean operative time was 186 (+/- 38) min. Penile skin graft was used in 48 (63,1 %) patients and buccal mucosa graft in 28 (36,8 %).
Median follow-up was 116 months (range 4-293). 74 out of 76 patients had complete follow up data. In total, 21 patients (28,3 %) presented a recurrence. The 5-year success rate was 80.6%, while the 10-year success rate was 67.8% when considering patients lost to follow-up. Only one recurrence (multi-staged peno bulbar stricture) occurred after 10 years of follow-up. At multivariate analysis, stricture length was associated with increased 5 year-recurrence (HR : 1.39/cm, p=0.04), but not with 10-year recurrence (HR : 1.05/cm, p=0.79).
There were 2 major postoperative complications (Clavien-Dindo grade IIIa/b), one haematuria and one compartment syndrome requiring reintervention with no long-term sequela.

Conclusion

Our study provides one of the longest follow-up for patients operated of bulbar stenosis by DOG urethroplasty. Success rate was high (80.6%) at 5-year and success was long-lasting with a 10-year success rate of 67.8%, achieving encouraging **Results**. Patients with long strictures should be informed about an increased risk of recurrence.

P020

Calibration after direct vision internal urethrotomy (DIVU): Is it successful?

J El-Khoury; C Iselin; M Valerio; O Windisch
HUG Hôpitaux Universitaires de Genève

Introduction

Direct visual internal urethrotomy (DVIU) is usually advocated as an upfront treatment for most urethral stricture, especially for < 2cm bulbar stricture. Current evidence on DVIU show a large heterogeneity in success rate varying from 8 to 77%. This might be related to heterogeneous indications as well as to the surgical technique and postoperative care. Adjuvant treatments, such as self-intermittent dilatation as well as intra-urethral corticosteroids have shown moderately increased success rate.

Objective

Assess the success rate of DVIU with adjuvant ID (at 3,6, and 12 postoperative weeks up to CH22) and evaluate intrinsic predictors of clinical success.

Material and Methods

Monocentric retrospective study on patients that underwent DVIU in our center between 2013 and 2018. Recurrence was defined as a composite outcome measure including the need for surgical reintervention or dilation, plateau configuration on uroflowmetry and/ or endoscopic/radiographic diagnosis of recurrence.

Results

119 patients were included in the study. A large majority of strictures (n = 103, 87 %) were bulbar, while meatal or penile (n = 7, 6%), membranous (n = 4, 3%) and multiple (n=5, 4%) were less frequent. Aetiology was mainly iatrogenic (n=85, 71%), idiopathic (n=13, 11%), after radiation therapy (n=12, 10%) and post-infectious (n=9, 8%). Stricture length was ≤1cm in 91 patients (78.5%), and >1cm in 25 patients (21.5%).
Success rate was 48.5% for bulbar stricture (50/103), 43% for meatal and penile stricture (3/7), 25% for membranous stricture and 20% (1/5) for multiple strictures. There was no difference in success rate when comparing stricture length using the 1cm cut-off. Patients with a clinical success were younger (61.3 vs 67.5, p=0.04), had a higher preoperative Qmax (9.2 vs 7.1, p=0.04), tended to have less history of previous endoscopic surgery (40.3 vs 55.6%, p=0.09), but did not have increased stricture length (9.3 vs 9.8 mm, p=0.69), neither higher rate of radiotherapy (10.5% vs 9.7%, p=0.87). We failed to identify success predictors on logistic regression.

Conclusions

Success rate of DVIU with ID are consistent with existing literature, with best **Results** in the bulbar urethra. The individual role of ID could not be established in the absence of control group. Whether adjuvant ID provides additional benefit to DVIU remains uncertain.

P021

Can we identify men with pure retroperitoneal teratoma to recommend primary retroperiotneal lymph node dissection instead of chemotherapy in Stage II Non-Seminomatous Germ Cell Tumors: A Multicenter Cohort Study

L Afferi1; L Antonelli2; S Sigg2; CD Fankhauser2
1 Luzerner Kantonsspital; 2 Luzerner Kantonsspital (LUKS)

Purpose: Retroperitoneal metastases consisting of pure teratoma in men with stage II non-seminomatous germ cell tumors (NSGCT) can only be cured through surgery, rather than chemotherapy. However, identifying such cases preoperatively poses a challenge. This multicenter cohort study **Aim**ed to investigate the pathology of the primary retroperitoneal lymph node dissection (RPLND) specimen in men with clinical stage II NSGCT.

Patients and Methods: Retrospective data from 17 institutions between 1995 and 2022 were collected and analyzed for patients who underwent primary RPLND for stage II NSGCT. The primary endpoints of the study included the RPLND specimen pathology, progression-free survival (PFS), distant metastasis-free survival (DMFS), retroperitoneal recurrence-free survival (RFS), cancer-specific survival (CSS), and overall survival (OS).

Results: Out of 247 men with clinical stage II patients, the surgical specimen revealed pure teratoma in 30/247 (12%), vital cancer in 141/247 (57%) and no cancer in 76/247 (31%). A more advanced clinical stage before surgery was associated with a positive pathological stage (OR 4.08, 95% CI 1.82-10.1, p-value = 0.001), while higher lymph node size on imaging before surgery was associated with the presence of teratoma-only in the specimen of RPLND (OR 1.06, 95% CI 1.01-1.11, p-value = 0.025).

Conclusion: Based on the preoperative variables examined in this study, the size of lymph nodes on imaging before surgery identifies patients which harbor retroperitoneal pure teratoma and benefit from primary RPLND.

P022

Risk factors for relapse in non-seminomatous testicular cancer after post-chemotherapy retroperitoneal lymph node dissection with viable residual cancer

L Afferi1; L Antonelli2; S Sigg2; CD Fankhauser2
1 Luzerner Kantonsspital; 2 Luzerner Kantonsspital (LUKS)

Purpose: No consensus exists on the management of men with non-seminoma and viable non-teratomatous germ cell tumor in the post-chemotherapy retroperitoneal lymph node dissection (pcRPLND) specimen following 1st line chemotherapy. We analyzed surveillance vs. different adjuvant chemotherapy regimens and the influence of time to pcRPLND on oncological outcomes.

Patients and Methods: Data on 117 men treated with cisplatin-based first-line chemotherapy between 1990 and 2018 were collected from 13 institutions. All patients had viable non-teratomatous germ cell tumor in the pcRPLND specimen. Surgery was performed after a median of 57 days, followed by either surveillance (n = 64) or adjuvant chemotherapy (n = 53). Primary endpoints were progression-free-survival (PFS), cancer-specific-survival (CSS), and overall-survival (OS).

Results: After controlling for IGCCCG risk group and % of viable malignant cells found at RPLND, no difference was observed between men managed with surveillance or adjuvant chemotherapy regarding PFS (hazard ratio (HR): 0.72, 95% confidence interval [CI] [0.32, 1.6], p-value = 0.4), CSS (HR: 0.69, 95% CI [0.20, 2.39], p-value = 0.6) and OS (HR: 0.78, 95% CI [0.25, 2.44], p-value= 0.7). No statistically significant differences for PFS, CSS, or OS were observed based on chemotherapy regimen or in men treated with pcRPLND ≤ 57 vs. > 57 days after first-line chemotherapy. Residual disease with < 10% vs ≥ 10% viable cancer cells were associated with a longer PFS (HR: 3.22, 95% CI [1.29, 8], p-value = 0.012). Relapse in the retroperitoneum was observed in 34 (29%) of men.

Conclusion: Men with a complete resection at pcRPLND, and < 10% viable cells have favorable outcomes without further treatment. Complete retroperitoneal resection seems more important than early pcRPLND.

P023

Improved quality of care for patients with germ-cell cancer: The interdisciplinary testis cancer clinic

L Funk[1]; N Grossmann[2]; C Fankhauser[2]; J Beyer[3]; A Lorch[1]; T Hermanns[4]
[1] Universitätsspital Zürich; [2] Luzerner Kantonsspital; [3] Insel Universitätsspital Bern; [4] Klinik Hirslanden

Introduction: Testicular germ-cell cancer (GCC) is the most common malignancy in young males. Treatment algorithms and follow-up (FU) schedules are well defined for patients with localized and metastatic GCC. Adherence to these guidelines guarantees the best possible oncological outcome while reducing over and under-treatment and unnecessary radiographic examinations. A interdisciplinary testis cancer clinic (ITCC) was introduced in 2016 in our tertiary care center. All patients were seen together by a urologist and medical oncologist. Furthermore, structured FU schedules for the different disease stages were implemented to ensure a consistent and evidence-based FU. The **Aim** of the present analysis was to investigate the impact of this ITCC on guidelines adherence (GA) and treatment decisions.

Methods: We retrospectively identified all GCC patients treated in our institution between 2012 and 2020. Patients were divided into two groups according to their FU timespan, either before (group 1) or after (group 2) the **Introduction** of the ITCC. Patient and FU characteristics as well as compliance patterns of guideline-recommended FU schedules during the first 5 years were compared.

Results: 143 patients were identified, 77 in group 1 and 66 in group 2. Metastatic patients in group 2 had a worse IGCCCG classification compared to group 1 (good 45% vs. 95%, intermediate 22% vs. 5%, poor 33% vs. 0%; $p < 0.01$). Time from orchiectomy to adjuvant or curative chemotherapy was significantly shorter in group 2 (24 d (IQR 15-33) vs. 32 d (IQR 21-48); p=0.01).
GA for FU was significantly better in group 2 (5-year completeness of all guideline-recommended consultations and diagnostics: 89% vs. 21%; $p < 0.001$). The 5-year median number of performed CT-scans were significantly less in group 2 (chest scans: 0 (IQR 0-1) vs. 2 (IQR 1-3); $p < 0.001$ and abdominal scans: 2 (IQR 2-3) vs. 3 (IQR 2-4); p=0.04). Group 1 contained 22 (41%) and Group 2 15 (31%) patients with clinical stage 1 treated with adjuvant chemotherapy (p=0.5). Among these, group 1 patients received significantly more often > 1 cycle carboplatin (9 (41%)) and > 1 cycle BEP (3(14%)) compared to group 2 (1 (7%) and 0 (0%), respectively; p=0.03).

Conclusions: A structured ITCC can significantly improve the quality of care in GCC patients. Adherence to treatment and FU recommendations, faster treatment delivery and less radiographic investigations all optimize the treatment and FU of this young patient population.

P024

Frequency effects and sex differences in pudendal nerve somatosensory evoked potentials

M Rüfli1; S van der Lely1; CE Anderson2; N Furlan1; SA Stalder1; U Mehnert1; TM Kessler1; MD Liechti1
1 Department of Neuro-Urology, Balgrist University Hospital, University of Zürich, Zürich, Switzerland; 2 Swiss Paraplegic Research, Nottwil and Department of Health Sciences and Medicine, University Lucerne, Lucerne, Switzerland; Department of Neuro-Urology, Balgrist University Hospital, University of Zürich, Zürich, Switzerland

Background and Aims: Pudendal long-latency somatosensory evoked potentials (SEPs) may provide insights into mechanisms involved in neurogenic lower urinary tract dysfunction (NLUTD) and modifications of brain activity induced by neuromodulation treatment. While SEPs are routinely assessed in clinics using a stimulation frequency around 3 Hz, slower frequencies are needed to assess long-latency SEPs. With the general goal to investigate pudendal nerve long-latency SEPs for application in NLUTD, this study **Aim**ed as a first step to investigate the effect of stimulation frequency and sex on the clinically established W-shaped pudendal nerve SSEPs (P40, N50, P65, N85).

Methods: In 20 healthy subjects (age: 21-71 y, 9 females), SEPs were evoked using rectangular stimuli of 0.2 ms applied at the pudendal and tibial nerve using a stimulation frequency of 3.1 Hz and 1.1 Hz. Signals were recorded from Cz'-Fz using scalp electrodes. On a single-subject level, P40, N50, P65, N85 components were analysed regarding responder rates, P40 latency, and P40N85 amplitudes. Linear mixed-effects models were calculated using frequency, sex, sex*frequency, body height, and age as predictors.

Results: Considering the presence of the four SEP components, responder rates were over 85% for both stimulation frequencies, except for pudendal N50, P65 using 1.1 Hz stimulation in males (55%). Regarding P40N85 amplitudes, linear mixed effect analyses revealed significant frequency effects (increased amplitudes using 1.1 Hz) for tibial and pudendal stimulation. Longer P40 latencies were found with increasing body height for pudendal and tibial SEPs. In addition to age effects, there was also a frequency effect for tibial P40 latencies. For pudendal stimulation, only an interaction between frequency and sex was found.

Conclusion: The study showed that pudendal SEP waveforms and amplitudes are sensitive to changes in stimulation frequency. All components could be reliably detected using clinically established stimulation parameters (3.1 Hz stimulation). However, slower stimulation frequencies affected the classical W-shaped SEP waveform, reflected in decreasing responder rates for N50 and P65 components, in particular in males. This was in contrast to tibial nerve SEPs and needs to be considered when using slower stimulation frequencies, as needed for studies investigating long-latency SEPs in healthy subjects and patients with NLUTD.

P025

Urodynamics are essential for predicting the risk for upper urinary tract damage after acute spinal cord injury

CE Anderson[1]; V Birkhäuser[2]; M Kozomara[3]; M Bywater[4]; O Gross[2]; S Kiss[4]; SC Knüpfer[5]; M Koschorke[4]; L Leitner[2]; U Mehnert[2]; H Sadri[2]; U Sammer[2]; L Stächele[2]; J Tornic[6]; MD Liechti[2]; MWG Brinkhof[7]; TM Kessler[2]

[1] Swiss Paraplegic Research, Nottwil; University of Lucerne, Lucerne, Switzerland; Department of Neuro-Urology, Balgrist University Hospital, University of Zürich, Zürich, Switzerland; [2] Department of Neuro-Urology, Balgrist University Hospital, University of Zürich, Zürich, Switzerland; [3] Department of Neuro-Urology, Balgrist University Hospital, University of Zürich, Zürich, Switzerland; Department of Urology, Cantonal Hospital Lucerne, Lucerne, Switzerland; [4] Department of Neuro-Urology, Balgrist University Hospital, University of Zürich, Zürich, Switzerland; Department of Urology, Cantonal Hospital Aarau, Aarau, Switzerland; [5] Department of Neuro-Urology, Balgrist University Hospital, University of Zürich, Zürich, Switzerland; Department of Urology, Clinic for Urology, University Hospital Bonn, Bonn, Germany; [6] Department of Neuro-Urology, Balgrist University Hospital, University of Zürich, Zürich, Switzerland; Department of Urology, Winterthur Cantonal Hospital, Winterthur, Switzerland; [7] Swiss Paraplegic Research, Nottwil; Faculty of Health Sciences and Medicine, University of Lucerne, Lucerne, Switzerland

Background and Objectives: Urodynamic investigation (UDI) is the gold standard to assess lower urinary tract (LUT) symptoms, and to identify urodynamic risk factors for upper urinary tract damage (detrusor overactivity combined with detrusor sphincter dyssynergia, maximum storage detrusor pressure ≥ 40 cmH2O, bladder compliance < 20 mL/ cmH2O, vesicoureteral reflux). However, UDI availability is limited in some settings. Prognostic models for urological outcomes could support clinical decision-making, thereby promoting stratified management, and potentially reducing the dependence on UDI. Therefore, we Aimed to develop a prediction model based on clinical parameters for the occurrence of urodynamic risk factors for upper urinary tract damage during the first year after acute spinal cord injury (SCI).

Materials and Methods: 97 patients underwent urodynamic investigation at 1, 3, 6 and 12 months after acute SCI in the framework of a population-based longitudinal study at a single university SCI centre. Candidate predictors were identified from the literature and included demographic characteristics, neurological and functional status 1 month after SCI. The occurrence of urodynamic risk factors for upper urinary tract damage was evaluated in univariable analysis. Multivariable logistic regression was used for prediction model development and internal validation. The impact of missing data in 24 patients (24/97, 25%) who did not return for a 12-month urodynamic follow up was investigated using sensitivity analyses.

Results: Two models showed fair discrimination for maximum storage detrusor pressure ≥ 40 cmH2O: i.) upper extremity motor score and sex, area under the receiver operating curve (aROC) 0.79 (95% CI: 0.69-0.89), C-statistic 0.78 (95% CI: 0.69-0.87), ii.) neurological level, American Spinal Injury Association Impairment Scale grade, and sex, aROC 0.78 (95% CI: 0.68-0.89), C-statistic 0.76 (95% CI: 0.68-0.85). In-depth analysis of all other outcomes was precluded by very low or high outcome prevalence in the population.

Conclusions: We identified two models that provided fair predictive value for urodynamic risk factors for upper urinary tract damage during the first year after SCI. Pending external validation, these models may be useful for clinical trial planning, but less so for individual-level patient management. Therefore, urodynamics remain essential for reliably identifying patients at risk for upper urinary tract damage.

P026

Temporal dynamics of urological management during acute spinal cord injury rehabilitation

CE Anderson[1]; V Birkhäuser[2]; MD Liechti[2]; X Jordan[3]; E Luca[3]; S Möhr[4]; J Pannek[5]; TM Kessler[2]; M Brinkhof[6]
[1] Swiss Paraplegic Research, Nottwil; University of Lucerne, Lucerne, Switzerland; Department of Neuro-Urology, Balgrist University Hospital, University of Zürich, Zürich, Switzerland; [2] Department of Neuro-Urology, Balgrist University Hospital, University of Zürich, Zürich, Switzerland; [3] Clinique Romande de Réadaptation, Sion, Switzerland; [4] Neuro-Urology, REHAB Basel, Basel, Switzerland; [5] Neuro-Urology, Swiss Paraplegic Center, Nottwil, Switzerland; Department of Urology, Inselspital, Bern University Hospital, University of Bern, Switzerland; [6] Swiss Paraplegic Research; Faculty of Health Sciences and Medicine, University of Lucerne, Lucerne, Switzerland

Background and Objectives: Timing of intervention, medication for storage symptom reduction and upper urinary tract protection as well as establishment of a patient-tailored bladder emptying Method, is an important aspect of urological management after acute spinal cord injury (SCI). Timing decisions require balancing potential benefits of early treatment for upper and lower urinary tract function against the risk of side effects and complications. We **Aim**ed to provide a description of the temporal dynamics of key urological interventions during SCI rehabilitation, as to date evidence on this topic is limited.

Materials and Methods: Data from the clinical record was collected by a prospective, population-based, multicenter, longitudinal study – the Swiss Spinal Cord Injury (SwiSCI) Inception Cohort. SwiSCI includes adult Swiss residents undergoing inpatient specialized post-acute SCI rehabilitation. Participating centers used a treatment approach based on the EAU Guidelines on Neuro-Urology. Time to the first report of bladder storage medication use (antimuscarinics and beta-3 adrenergic agonists), and placement of a suprapubic catheter (an example of a patient tailored bladder emptying Method) were evaluated with multivariable parametric time-to-event analyses, adjusting for demographic and SCI characteristics.

Results: During rehabilitation 283/919 patients (31%) were given bladder storage medication with a median time to first reported use of 97 (Q1-Q3: 73-165) days after SCI. In adjusted analysis, earlier bladder storage medication start was associated with traumatic SCI (vs. non-traumatic SCI), and more severe SCI - American Spinal Cord Injury Association Impairment Scale (AIS) grades A,B,C (vs. AIS D). Suprapubic catheters were used by 174/919 patients (19%). The median time to suprapubic catheter insertion was 99 days (Q1-Q3: 59-183) after SCI. Earlier suprapubic catheter insertion was associated with older age, more severe SCI (cervical AIS A,B,C vs. AIS D), and tentatively sex (female). There were differences in timing between rehabilitation centers for both outcomes.

Conclusions: These Results provide a preliminary description of the temporal dynamics of key urological interventions during SCI rehabilitation in a high-resource setting. Targeted prospective research evaluating center-specific patient management in relation to long-term outcomes is warranted to inform recommendations on optimal intervention timing after SCI.

P027

Sacral neuromodulation: early complications and patient' satisfaction in the test phase

J Blanc; B Roth; N Grilo
CHUV - University Hospital

Context: Sacral neuromodulation (SNM) is a well-established third-line therapy after behavioral modifications and pharmacotherapy for patients with various urinary tract dysfunctions. Multiple studies have explored its use in different conditions, ranging from overactive bladder to urinary retention and bladder pain syndrome. The efficacy of SNM depends on the underlying disease, ranging from 71% to 83%. To properly select patients, a stage I test period is usually conducted before definitive implantation. Patients who report at least a 50% improvement in one or more symptoms proceed to stage II. The safety of SNM is well-known, and long-term complications can be easily managed. However, few studies have examined the short-term complications of the test phase, and no studies have evaluated patient satisfaction and regret in cases where the test phase failed.

Materials and Method: retrospective analysis of data from patients who underwent SNM at a single center between January 2015 and February 2023 for various urinary indications. We selected patients who only underwent the test phase, with no subsequent definitive implantation due to different reasons, such as lack of improvement or adverse events. These patients were asked a yes/no question regarding whether they regretted undergoing the SNM test phase. Additionally, patients were asked to complete the Patient Global Impression of Improvement (PGI-I) survey.

Results: A total of 53 patients underwent SNM between January 2015 and February 2023. 16 patients underwent the test phase only; 12 of them responded to the survey. The majority of patients were female (58%, N = 7). Most frequent diagnosis was detrusor underactivity (58%, n = 7). The primary reason for patients only undergoing the test phase was a lack of improvement in urinary symptoms (83%, n = 10), while only 17% (n = 2) experienced lead infection. Among those who responded to the survey, 92% (n = 11) reported a PGI-I score of 4 (no change), and 8% (n = 1) regret the intervention.

Conclusion: SNM is a minor surgical intervention that may not be effective for every patient, which is why a two-phase procedure is recommended. In our experience, even in cases where the test phase fails, patients did not express regret about the intervention. This suggests that the risk of failure during the test phase should not play a role in the evaluation of whether to perform SNM if the indication is correct and the patient willing to try.

P028

Transurethral Resection of the Prostate versus Medical Treatment for Bladder Outlet Obstruction in Non-Neurological Patients with High Storage Pressures: A Pilot Study

S Kiss1; L Brunaiova2; M Kwiatkowski2; S Wyler2
1 Kantonspital Baselland; 2 Kantonsspital Aarau

Purpose: Due to potential postoperative risks in male patients with non-neurogenic lower urinary tract symptoms (LUTS) with detrusor overactivity (DO) (≥ 40 cmH2O) and bladder outlet obstruction (BOO) we **Aim**ed to investigate the effect of transurethral resection of the prostate (TURP) compared to alpha1-adrenoreceptor-antagonists and antimuscarinics/beta-3-agonists.

Materials and Methods: We retrospectively analyzed nineteen patients in two urological centers investigating bladder function by video-urodynamic investigations and patient-reported outcomes by International Prostate Symptom Score (IPSS) before and after treatment. A nonparametric test was employed in the statistical analysis.

Results: The IPSS showed a significant improvement in the surgical group (p= 0.032, compared to the conservative group p=0.192). Post-interventional quality of life (QoL-IPSS) ameliorated after TURP (p=0.042), but not under medical therapy. Qmax, post-void residual, and events of incontinence improved significantly in the surgical group (p= 0.028, 0.038, 0.034, respectively). Maximum detrusor pressure amplitude decreased in both groups significantly after the intervention (p = 0.009 after TURP and p = 0.008 after medical treatment, respectively). Maximum cystometric capacity raised in both groups. Bladder compliance improved in the medical group (p = 0.028).

Conclusions: In our pilot study of non-neurological patients with high storage pressures and BOO, both TURP and medical treatment improved urodynamic parameters and TURP led to a better quality of life compared to medical treatment. Thus, well-designed prospective randomized controlled trials are highly warranted further exploring this under-researched topic.

P029

Feasibility of lumbosacral spinal cord imaging for patients with neurogenic lower urinary tract dysfunction: a diffusion MRI study

S Büeler1; P Freund2; TM Kessler1; G David1; MD Liechti1
1 Department of Neuro-Urology, Balgrist University Hospital, University of Zürich, Zürich, Switzerland; 2 Spinal Cord Injury Center, Balgrist University Hospital, University of Zürich, Zürich, Switzerland

The lumbosacral spinal cord (SC) contains nuclei that innervate the lower urinary tract [1]. Therefore, pathological changes in the lumbosacral gray matter (GM) or white matter (WM) may lead to neurogenic lower urinary tract dysfunction (NLUTD). Assessments of the conus medullaris (CM) by magnetic resonance imaging (MRI), particularly diffusion MRI opens the possibility to examine the structural underpinnings of NLUTD [2]. The **Aim** of the study is to investigate the feasibility of lumbosacral MRI in healthy subjects and a patient cohort representative for the challenging imaging conditions typical for patients with NLUTD.

Ten healthy subjects and 10 acute SCI patients (1-month after injury, with radiologically normal appearing lumbosacral cord and varying types and severity of NLUTD) underwent 3T imaging (Siemens Prisma Scanner). Twenty axial T2*-weighted (5 mm thickness, FLASH sequence) and 15 diffusion-weighted slices (5 mm thickness, reduced FOV single-shot spin-echo echo planar imaging sequence) were acquired in the lumbosacral cord. SC and GM were segmented manually, providing tissue-specific cross-sectional area (CSA) measurements and diffusion tensor imaging (DTI) maps (fractional anisotropy (FA), axial diffusivity (AD), and radial diffusivity (RD)). DTI metrics were extracted within the WM using the PAM50 WM atlas.
Accounting for the varying length of the CM between subjects, outcomes were calculated for interpolated equidistant slices (normalized for the individual length of the CM) representing the same neurological levels across subjects. Scan-rescan reliability was assessed by computing coefficient of variation (COV). A linear mixed effect model was used to assess group differences ($p < 0.05$).
The scan-rescan reliability at the lumbosacral enlargement showed COVs below 3 % for CSA and below 6% for total WM DTI outcomes, with increasing COV towards the tip of the CM. Patients showed smaller CSA and FA values ($p < 0.05$) in the upper part of the CM.

CSA and DTI measurements were feasible in the lumbosacral cord in individuals with NLUTD and subtle neurodegenerative CM changes. Reduced CSA and DTI outcomes indicate secondary tissue atrophy and impaired tissue integrity of WM early after SCI. The presented **Methods** providing structural imaging correlates may be used in neurological diseases affecting the lower SC. This may help to increase our understanding of the underlying pathophysiological processes of NLUTD.

P030

Similar artefact susceptibility for water- and air-filled urodynamic systems: Results from a randomized controlled non-inferiority trial

MME Kasten1; O Gross1; MS Wettstein2; CE Anderson1; V Birkhäuser1; J Borer1; M Koschorke1; MD Liechti1; S McCallin1; U Mehnert1; H Sadri1; L Stächele1; S van der Lely1; TM Kessler1; L Leitner1
1 Department of Neuro-Urology, Balgrist University Hospital, University of Zürich, Zürich, Switzerland; 2 Department of Urology, University Hospital Zürich, University of Zürich, Zürich, Switzerland

Aims

Urodynamic investigation (UDI) is the gold standard to assess refractory lower urinary tract symptoms. Water-filled systems (WFS) are the **Method** of choice for UDI pressure measurements according to the International Continence Society (ICS). However, air-filled systems (AFS) are widely used as convenient alternative to WFS, although it is unclear whether these systems produce comparable measurements.

Materials and Methods

In this randomized controlled non-inferiority trial patients (n=490) scheduled for UDI were allocated by block randomization in a 1:1 ratio to undergo UDI using a WFS (n=244) or an AFS (n=246). UDI consisted of same session repeat filling cystometry and pressure flow study. The primary endpoint was artefact susceptibility evaluated by a modified Bristol UTraQ quality scoring scale (Gammie A. et al., Neurourology and Urodynamics, 2022;41:672–678) ranging from 0-18, with higher scores indicating a better quality. Urodynamic traces were assessed by an expert in functional urology blinded to the measurement system used. A clinically meaningful non-inferiority margin was pre-specified as -2 points on the quality scoring scale (AFS-WFS). Non-binary data presented as median and Q1-Q3.

Results

The median overall quality score was 14.5 points (13.5-15.5) for the WFS and 15.5 (14.5-16.5) for the AFS. Inferiority of AFS could be rejected at the pre-specified non-inferiority margin (0.96, 95%-confidence-interval 0.68-1.25, $p < 0.001$). Typical artefacts consisted of repeated relevant rectal contractions (WFS vs AFS: 57% (138/244) vs 68% (166/246), p=0.015), poor pressure transmission during cough test at empty bladder (WFS vs AFS: 38% (93/244) vs 4% (10/246), $p < 0,001$), and detrusor resting pressure outside of the physiological range at empty bladder (i.e., > 5cmH2O or < -5cmH2O) (WFS vs AFS 16% (40/244) vs 42% (104/246), $p < 0.001$). Overall, AFS revealed higher resting pressures at start of UDI (vesical pressure WFS vs AFS: 18.5 (14.5-24) vs 27 (22-30) cmH2O; abdominal pressure 20 (15.5-25) vs 30.25 (25.5-35.5) cmH2O, $p < 0.001$). Median UDI installation time was similar between groups (WFS vs AFS: 26 (20-32) vs 26 (20-32) min, p=0.913).

Conclusions

Our **Results** demonstrate that AFS are non-inferior to WFS regarding overall quality of urodynamic traces. However, both measurement systems have particular pitfalls that need to be known for problem solving during UDI and require awareness for accurate interpretation of UDI.

P031

Sensory assessments in patients with neurogenic lower urinary tract dysfunction undergoing sacral neuromodulation testing

SA Stalder[1]; MD Liechti[1]; S van der Lely[1]; S Knüpfer[2]; CE Anderson[3]; L Leitner[1]; U Mehnert[1]; J Tornic[4]; TM Kessler[1]
[1] Department of Neuro-Urology, Balgrist University Hospital, University of Zürich, Zürich, Switzerland; [2] Department of Urology, University Hospital of Bonn, Bonn, Germany; [3] Department of Neuro-Urology, Balgrist University Hospital, University of Zürich, Zürich, Switzerland; Swiss Paraplegic Research; Department of Health Sciences and Medicine, University of Lucerne, Switzerland; [4] Department of Urology, Winterthur Cantonal Hospital, Winterthur, Switzerland

Background: Sacral neuromodulation (SNM) as well-established therapy for non-neurogenic lower urinary tract dysfunction has increasing evidence in patients with neurogenic lower urinary tract dysfunction (NLUTD). Neuromodulation may affect afferent signal processing (e.g. increased current perception thresholds (CPTs) after SNM, increased amplitudes in long-latency sensory evoked potentials (SEPs) after tibial nerve stimulation) however, the exact mechanism of action is unclear. Therefore, we **Aim**ed to investigate the relevance of sensory assessments in the context of SNM in patients with NLUTD.

Methods: CPTs and SEPs during tibial, pudendal and lower urinary tract (LUT) (bladder dome, trigone, proximal & distal urethra) electrical stimulation (3 Hz: tibial, pudendal, 0.5 Hz: LUT stimulation) were assessed in 40 patients with refractory NLUTD pre/post-SNM testing. CPTs, SEP trajectories (Cz-Fz) and the presence of components (tibial & pudendal SEPs: P40, N50, P65, N85; LUTSEPs: P1, N1, P2) were analysed on group level, stratified per location. For individual component analyses, peak markers were set in patients with all components present.

Results: For tibial and pudendal SEPs, all components were visible on group level. Marker analyses (n = 18) revealed no changes (latencies, amplitudes) between visits. This allowed fixed time-point analysis revealing amplitude changes in late (>85 ms) components after SNM testing.
LUTSEP trajectories (group level) revealed all predefined components (all locations), without changes in amplitudes after SNM. However, there were trends for consistent changes in the N1-P2 transition (increased amplitudes after SNM).
Overall (n = 40), CPTs did not change after SNM testing for all stimulations.
Considering clinical success, analyses revealed differential effects between SNM responders and non-responders in CPTs for tibial stimulation only (decreased in responders, no change in non-responders). However, non-responders showed higher LUTCPTs (both visits). Preliminary analysis of SEP trajectories pointed towards differential effects requiring further analyses.

Conclusions: This is the first study combining tibial, pudendal and LUTSEPs with CPT assessments in patients with NLUTD undergoing SNM. CPT and SEP assessments indicate changes after SNM testing and may predict SNM success. Considering the heterogenous neuro-urological patient population, our findings are promising,but further investigations with larger groups are warranted.

P032

Does HEXVIX instillation at TURB improve disease recurrence in NMIBC patients treated with BCG by modifying the tumor environment?

S Martinez Carrique1; F Crettenand2; M Pal2; S Reale2; P Bohner2; S Rodrigues2; B Roth2; I Lucca2
1 CHUV; 2 Centre Hospitalier Universitaire Vaudois (CHUV)

Aims of study: Recurrence rates of non-muscle-invasive bladder cancer (NMIBC) remain very high despite early detection, regular surveillance and appropriate treatment. Intravesical BCG is considered the standard of care for high risk NMIBC, although treatment failure may occur in almost 50% of cases. Cystoscopy with photodynamic diagnosis after intravesical instillation of photoactive porphyrins (HEXVIX), enhances tumor visualization and optimizes endoscopic bladder resection (TURB). Recent data suggest that HEXVIX may affect the immune cell composition and tumor microenvironment, improving BCG response. The **Aim** of our study was to evaluate the impact of HEXVIX on recurrence rate after BCG-therapy in high risk NMIBC patients.

Materials and Methods: A retrospective analysis of 86 patients who underwent BCG-therapy at our center between 2010 and 2022 was performed. Inclusion criteria were patients who had TURB for high-risk NMIBC, followed by 6 course BCG intravesical induction therapy. Patients were assigned to two groups according to the use of HEXVIX at the time of TURB (intervention group) or white light TURB (control group). Demographic, oncologic, and pre-operative data were collected. Chi-square and Mann-Whitney U tests were used to compare patients with HEXVIX TURB to those operated with white light TURB. Multivariate analysis was not performed because of the low number of recurrences.

Results: The two populations had similar demographic and clinical characteristics. Patients who underwent HEXVIX TURB had higher tumor stage (p=0.001) and more concomitant Cis (p=0.02). Of the 86 patients, 11 (13%) had tumor recurrence after BCG-therapy. Although not statistically significant, disease recurrence rate was higher in the white light group (9% vs. 20%, p= 0.14), with a median time to recurrence of 30 months versus 12.5 months.

Discussion: We observed a reduced recurrence in NMIBC patients exposed to HEXVIX during TURB, who subsequently received BCG. This is despite the fact that tumor stage in HEXVIX group was higher compared to control. Our data are compatible with a potential clinical treatment effect of HEXVIX although our retrospective analysis could not discriminate between a higher quality of the resection due to HEXVIX and a possible role of HEXVIX on tumor microenvironment. In vitro studies and prospective clinical trial would be needed to further elucidate the therapeutic role of HEXVIX.

P033

Efficacy and tolerability of BCG Russia for the treatment of non-muscle-invasive bladder cancer – analysis of prospective registry

S Flury-Sutter1; F Heuzeroth1; H Püschel1; S Hayoz2; CA Rentsch1
1 Universitätsspital Basel, Urologie; 2 Swiss Group for Clinical Cancer (SAKK) Research Coordinating Center

Background: The global shortage of BCG has led to significant medical and economic implications. To address the problem of BCG shortage, we have been using BCG Russia under a special governmental permission since 2013. Little is known about the efficacy and tolerability of BCG Russia. Therefore, we assessed these parameters from our prospective BCG registry of patients treated with intravesical BCG Russia.

Material & Methods: Prospective collection of data was carried out at the Department of Urology, University Hospital Basel, between 01/2013 and 04/2023. The data comprised 102 BCG naive patients, who had been diagnosed with urothelial carcinoma and were treated with BCG Russia (ONCO-BCG-SIIL, Serum Institute of India, Pune, India). Enrolled patients underwent BCG induction therapy and were scheduled for 3 maintenance cycles within one year. Subsequent follow-up was performed in compliance with the EAU guidelines. Side effects were classified according to a scale based on the WHO recommendation Tolerability was defined as side effects that resulted in early cessation of adequate BCG therapy.

Results: The patient population consisted of 85.3 % males and 14.7 % females. 29.4 % belonged to the intermediate-, 59.8 % to the high- and 10.8 % to the very-high-risk group for progression. Average follow-up time was 37 months. At the time of data analysis, 96 % had received adequate induction and 72.5 % adequate BCG maintenance. One-, 3- and 5-year RFS was 76.5 %, 63.5 % and 59.3 %. 32.4 % had a bladder cancer recurrence after/during BCG therapy, with progression in stage and/or grade seen in 9 % of the patients. 82 % of urothelial bladder cancer recurrences occurred within 12 months after the last BCG instillation. The cystectomy rate was 8.8 %, all due to bladder cancer recurrence. Progression to muscle invasive disease was seen in 2 of 9 of the patients who underwent cystectomy. Side effects occurred in 72.5 % of patients, with side effects > Class II seen in 8 %. Early cessation due to side effects resulting in non-adequate BCG therapy was seen in 4 patients during induction and 3 patients during maintenance therapy.

Conclusion: BCG Russia was well tolerated and resulted in comparable RFS and PFS as compared with historical Results of prospective clinical trials with other BCG strains. These Results might be interesting for patients and urologists who will start or have started to use BCG Russia for the treatment of NMIBC in order to mitigate the BCG shortage.

P034

Safety and efficacy of adjuvant intravesical microwave-induced chemohyperthermia for intermediate- and high-risk non-muscle-invasive bladder cancer

A Gregoris; E Grobet-Jeandin; M Valerio
Hôpitaux Universitaires de Genève

Introduction & **Objective**s

Non-muscle-invasive bladder cancer(NMIBC) is an heterogenous group of disease diagnosed and treated in most cases by transurethral resection of bladder tumor(TURBT). Adjuvant intravesical chemotherapy(CT) or Bacillus Calmette-Guerin(BCG) is recommended depending on prognosis. Different options such as microwave-induced hyperthermia **Aim** to improve efficacy of CT. The **Objective** of the study was to assess the safety and efficacy of microwave-indued chemohyperthermia(CHT) in intermediate- and high-risk NMIBC patients.

Materials & Methods

In this monocentric, observational study carried out between 2015 and 2021, consecutive patients undergoing CHT(Synergo®) after TURBT for intermediate- or high-risk NMIBC in our institution, were included. CHT protocol consisted of induction (8 weekly) followed by maintenance (6 every 6 weeks, for 1 or 2 years depending on risk group). Recurrence-free and progression-free survival were primary outcomes. Overall survival(OS) and safety were secondary outcomes. Treatment-related adverse events(TRAE) were classified according to Common Terminology Criteria for Adverse Events(CTCAE).

Results

A total of 30 patients were included. Median age was 67(IQR 62-77). The study population mainly consisted of men(83%), smokers(70%) with ASA score 2-3(85%). Prior to CHT, patients underwent a median of 2 TURBT(IQR 1-3) and 87% had previous intravesical instillations(CT 15%, BCG 70%, CT followed by BCG 11%). Stage pTa, pT1 and pTis were present in 59%, 24% and 17% patients, respectively. Most tumors were high-grade(62%), multifocal(median 3 lesions (IQR 1-4),< 3cm(89%). Tumors were respectively intermediate-, high- and very high-risk in 52%, 41% and 7%.
Patients benefitted from a median of 11 instillations(IQR 8-16). Only 3 (10%) reported TRAE (2 grade I: irritating voiding symptoms, 1 grade II: allergy). After a mean follow-up of 37 months(SD 19), 11 patients recurred(37%) and 2 progressed to muscle-invasive disease(7%). Mean time to recurrence and progression was 17(SD 16) and 17 months(SD 7). Recurrences were mostly pTa(90%) and high-grade(56%). 2 patients underwent radical cystectomy (RC). OS was 76% at last follow-up and no bladder cancer-related death was reported.

Conclusion

Adjuvant CHT is a safe and well-tolerated treatment preventing recurrence in almost two-third of patients with intermediate- or high-risk NMIBC. It appears to be a potential alternative to avoid immediate RC in selected cases.

P035

Development and validation of a risk prediction model for venous thromboembolism in bladder cancer patients undergoing radical cystectomy

L Afferi1; L Antonelli2; S Sigg2; CD Fankhauser2
1 Luzerner Kantonsspital; 2 Luzerner Kantonsspital (LUKS)

Background

Guidelines recommend thromboprophylaxis during chemotherapy in cancer patients with an intermediate-to-high risk of thromboembolic events (VTE), specifically those with a Khorana risk score > 2. No disease specific risk model has been developed radical cystectomy patients with or without neoadjuvant chemotherapy.

Methods

We retrospectively gathered data from patients scheduled for radical cystectomy in North America, Europe and Asia to build risk prediction models which were compared to the Khorana risk score. Data from 4631 radical cystectomy patients with non-metastatic urinary bladder cancer during 1990–2021 at 28 centers across 13 countries neither receiving prophylactic thromboprophylaxis nor anticoagulation. Multivariable adjusted time-to-event analyses to estimate the risks of VTE internal cross- and external validation.

Results and limitations

The strongest risk factors represented the use of neoadjuvant chemotherapy (hazard ratio (HR) 5.264, 95% CI 2.655-10.44, p-value < 0.001). Cross-validation on the development cohorts yielded the best model area under the receiver operating characteristic curve (AUC) with 65% compared to an AUC of 55% for a model including the use of neoadjuvant chemotherapy only or a Khorana score > 2 with an AUC of 64%.

Conclusion

Patients receiving neoadjuvant chemotherapy are at an increased risk to develop VTE before or after cystectomy. Neither our newly developed models nor the Khorana score was useful to further identify additional risk factors for VTE during neoadjuvant chemotherapy.

P036

Is radical cystectomy becoming a geriatric surgery?

S Reale; M Humbert; S Martinez Carrique; F Crettenand; M Pal; P Bohner; S Rodrigues Dias; B Roth; I Lucca
CHUV Centre Hospitalier Universitaire Vaudois (CHUV)

Objectives

Radical cystectomy (RC) is the standard of care for muscle invasive and recurrent bladder cancer (BC). Despite standardized surgical technique and perioperative care, RC morbidity leads to longer length of stay (LOS) and worse survival. Thus, RC is often not considered as an option in elderly patients. The **Aim**s of this study were to assess correlation between age and major postoperative complications, and to evaluate the impact of preoperative geriatric screening on their occurrence in geriatric patients undergoing RC.

Materials and Methods

Between 2012 and 2023, data from 274 consecutives RC for BC were retrieved and analyzed. Patients were divided into two groups according to their age: young (< 70 years) or elderly (above). All patients were treated according to ERAS protocol. Clinical, demographic, and pathological data were assessed. In addition, between April 2022 and March 2023, all geriatric patients undergoing RC were screened with 5 geriatric scores (Kondrup, FTRST, G8, Mini-Cog and Timed Up and Go-TUG) to identify those requiring a postoperative geriatric follow-up (screened elderly RC). These patients were compared to a group of elderly patients without preoperative geriatric screening (not screened elderly RC). Logistic regression analysis was used to identify predictors of 30-days complications.

Results

Of the 274 patients, 155 (57%) were classified as elderly. Most of them were male (74.5%) and 129 (47%) had an ASA score ≥ 3. Young patients had more often neoadjuvant chemotherapy (33% vs 12.2%, $p < 0.001$) and an orthotopic urinary diversion (34% vs 3%, $p< 0.001$). Major complication rate was similar between two groups ($p=0.27$). Mean LOS was one day shorter for geriatric patients compared to younger one ($p=0.54$). On multivariate analysis, older age was not associated with a higher risk of complications. Of the 17 patients in the screened elderly RC group, 4 required a postoperative geriatric follow-up. Incidence of overall complication was 52% in the screened elderly RC group versus 77.8% ($p=0.08$) in control group. Mean LOS was lower in screened elderly (12.5 days) compared to control (16 days).

Conclusions

Our data show that RC is a safe treatment option even for elderly patients, as complication rate and LOS were similar compared to younger ones. Geriatric preoperative assessment and follow-up may help to avoid complications after RC in elderly patients and should be part of the standard of care in this subgroup of patients

P037

Perioperative Monitoring of ERAS Elements in Patients Treated with Radical Cystectomy

S Sigg; A Bloch; L Antonelli; K Blättler; S Stöckel; L Vetter; A Mattei; M Marggraf; M Graf; C Fankhauser
Luzerner Kantonsspital (LUKS)

Background

Enhanced Recovery after Surgery (ERAS) protocols have shown to improve peri- and postoperative outcomes, particularly by reducing complications and length of hospital stay. However, implementing these multidisciplinary recommendations in routine clinical practice remains challenging. This cross-sectional analysis **Aim**s to examine the ERAS elements that can be derived from perioperative monitoring in patients undergoing radical cystectomy.

Material and Methods

We conducted a retrospective analysis of perioperative data from patients who underwent radical cystectomy between September 2019 and December 2021. We collected data on various variables, including the type of urinary diversion, utilization of nasogastric tube, occurrence of mean arterial pressure (MAP) below 65mmHg during surgery, postoperative opioid use, changes in weight before and after surgery, presence of parenteral feeding and use of transfusions.

Results

A total of 47 patients were enrolled in the study, comprising 76% males and 24% females. The median Charlson comorbidity score was 5, indicating a moderate level of comorbidities. The most commonly employed urinary diversion technique was the ileal conduit, accounting for 55%, followed by neobladder (34%), ureterocutaneostomy (6%), and pouch (4%).
During the surgical procedure, all patients were administered a nasogastric tube. Among the patients, 24 out of 47 (51%) exhibited a mean arterial pressure (MAP) < 65 mmHg during perioperative monitoring. The median increase in postoperative weight was 3 kg, with an interquartile range of 1.2-5.2 kg. Transfusions were required in 28% of the cases.
In terms of analgesia, Oxycodone was prescribed to 45% of patients, while Oxycodone-Naloxone, Fentanyl, and Morphine were used in 23%, 19%, and 6% of patients, respectively. On average, patients received 573 mcg of Fentanyl and 2.3 mg of Morphine. Additionally, 23% of the patients received parenteral feeding due to postoperative ileus, which also necessitated the use of a nasogastric tube.

Conclusion

Our study provides a detailed description of the patient demographics and perioperative management of radical cystectomy in our institution. This study highlights the need to implement a pre, peri- and postoperative standard operative procedure protocol, including close monitoring of MAP, limited i.v. fluid administration, preoperative anaemia correction and restrictive transfusions limits, omitting nasogastric tube usage and reduced opiate use.

P038

Oncological and functional surveillance after radical cystectomy, a narrative review of the enhanced recovery after surgery (ERAS) cystectomy committee

E Kaufmann[1]; P Black[2]; J Catto[3]; H Djaladat[4]; S Ghodoussipour[5]; J Hamilton-Reeves[6]; BT Jensen[7]; W Kassouf[8]; SV Lauridsen[9]; S Lerner[10]; C Llorente[11]; K Loftus[12]; I Lucca[13]; A Martini[14]; M Preston[15]; S Psutka[16]; J Sfakianos[17]; J Sfakianos[17]; J Shah[18]; M Wettstein[1]; S Williams[19]; S Daneshmand[20]; C Fankhauser[21]

[1] University of Zurich, Zurich, Switzerland; [2] Department of Urologic Sciences, University of British Columbia, Vancouver, BC, Canada; [3] Academic Urology Unit, University of Sheffield, Sheffield, UK; [4] Institute of Urology, Kenneth Norris Jr. Comprehensive Cancer Center, University of Southern California, Los Angeles, California; [5] Section of Urologic Oncology, Rutgers Cancer Institute of New Jersey, New Brunswick, New Jersey; [6] Department of Urology, University of Kansas Medical Center, Kansas City, KS; [7] Department of Urology, Aarhus University Hospital, Aarhus, Denmark; [8] Department of Surgery (Urology), Faculty of Medicine, McGill University, Montreal, Canada; [9] Department of Surgery, Herlev-Gentofte, Copenhagen University Hospital, Denmark and WHO-CC, Parker Institute Bispebjerg & Frederiksberg University Hospital, Copenhagen, Denmark; [10] Scott Department of Urology, Dan L. Duncan Cancer Center, Baylor College of Medicine, Houston, TX 77030, USA; [11] Department of Urology, Hospital Universitario Fundación Alcorcon, Avenida Budapest 1, 28922, Alcorcón, Madrid, Spain; [12] Department of Anaesthesiology, Perioperative and Pain Medicine, Icahn school of Medicine at Mount Sinai, New York, NY; [13] Department of Urology of Lausanne, CHUV, Switzerland; [14] University of Texas MD Anderson Cancer Center, Houston, TX, USA; [15] Division of Urological Surgery and Center for Surgery and Public Health, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA; [16] Department of Urology, University of Washington, Seattle, WA, USA; [17] Department of Urology, Icahn School of Medicine at Mount Sinai, New York, NY, USA; [18] Department of Urology, Stanford University School of Medicine, Stanford, California; [19] Division of Urology, Department of Surgery, University of Texas Medical Branch, Galveston, TX, USA; [20] Department of Urology, Keck School of Medicine, University of Southern California, Los Angeles, California, USA; [21] Department of Urology, Luzerner Kantonsspital, Luzern, Switzerland

Introduction:
The **Aim** of oncological and functional follow-up investigations after radical cystectomy is to detect relapse as well as functional complications to prevent harm and improve quality of life, but there are differences in follow-up recommendations among guidelines.

Methods:
We conducted a literature search and reviewed guidelines and institutional follow-up protocols.

Results:
Our analysis included 38 studies involving 26,441 patients. 29 studies discussed oncological outcomes, whereas 14 discussed functional complications. Most relapses occur within the first two years either locally in the abdomen/pelvis or as distant recurrences in the chest, liver, bones, or brain. Factors that increase the risk of relapse include higher tumor stage, nodal involvement, histological subtypes, and lymphovascular invasion. There was significant variation in surveillance protocols with respect to the frequency and type of follow-up investigations. Few recommendations were identified for patients with ypT0, pT0 or non-muscle-invasive bladder cancer.

Functional complications can be seen in up to 90% of all patients within 15 years after urinary diversion and mainly include impairment of urinary or sexual function as well as renal/metabolic disturbances but only limited evidence supporting any functional follow-up recommendation was identified. Current guideline recommendation should be rephrased to ensure routine implementation of functional follow-up investigation.

Discussion:
Our review of recommended oncological and functional follow-up protocols after cystectomy revealed varying recommendation. Future research should evaluate the impact of follow-up protocols after cystectomy on oncological and functional outcomes to establish optimal surveillance procedures following treatment.

P039

Non-malignant cystectomies in Switzerland: the first analysis from the Swiss Society of Urology Register

M Pal1; P Bohner1; N Grilo1; R Strebel2; B Roth1; I Lucca1
1 CHUV Centre Hospitalier Universitaire Vaudois (CHUV); 2 Kantonspital Chur

Introduction

Simple cystectomy (SC) is often the last resort for patients who have failed previous con-servative treatment for non-malignant conditions. However, it remains a complex surgical procedure that is poorly evaluated due to many studies being based on small sample size and a heterogeneous population. The Swiss Society of Urology (SSU) has developed a prospec-tive register to collect data of patients undergoing SC for non-oncological diseases to collect valuable data on surgical indications, procedures and outcomes. The **Aim** of this study is to assess the national surgical activity on SC for non-oncological pathologies after the introduc-tion of the SSU register.

Method

We performed a retrospective analysis of all non-oncological SC included in the SSU register between January 2020 and April 2023. Participation in the registry was free and open to all urologists working in Switzerland. Data on the type of pathology, surgical procedure, complications as well as functional PROMS were prospectively collected through an electronic database. A demographic analysis, as well as a study of the type of operation and morbidity, were performed.

Results

Of the 46 SC patients included in the analysis, 50% were male and the median age was 67 years (IQR 61-75). The majority of the population had an ASA score of 3 or higher (87%). The most common conditions before surgery were neurogenic bladder (n=17, 37%), fistula (n=5, 11%) and total refractory incontinence (n=4, 9%). Open SC was performed in 32 patients (70%), while robot-assisted surgery was performed in 13 patients (28%), of whom 38% (n=5) needed conversion to the open technique. Regarding the urinary diversion, ileal conduit was performed in 85% (n=39) of the cases, heterotopic urinary bladder replacement in 7% (n=3), uretero-cutaneostomy in 4% (n=2) and orthotopic neobladder in 2% (n=1). The median length of hospital stay was 13 days (IQR 9-18) and the median operation time was 240 min (IQR 180-305). 30-day complications were present in 15 patients (33%). Infectious (n=9, 60%) and wound complications (n=4, 27%) were the most common ones. Number of registered cases increased over the 3 years observed (2020 n=9, 2021 n=13, 2022 n=20).

Conclusion

This is the first analysis on non-malignant SC from the SSU register. The collection of quality parameters on a large scale may improve the outcomes of complex surgical procedures in the country and identify potential areas for improvement in a selected population.

P040

Swiss Society of Urology Register for radical cystectomy: the first analysis

P Bohner1; F Crettenand1; R Strebel2; B Roth1; I Lucca1
1 Lausanne University Hospital (CHUV); 2 Kantonspital Chur

Introduction

A national cancer database is a unique tool to explore trends in cancer care, to create regional benchmarks for physicians and to serve as the basis for quality improvement. To monitor the quality of bladder cancer (BC) care, the Swiss Society of Urology (SSU) has developed a prospective register to collect pre- and postoperative data of patients undergoing radical cystectomy (RC) for BC. The collection of quality parameters on a large scale can provide valuable data to all swiss urologists on BC incidence, surgical activity, effects of treatment and survival. Moreover, it may help those responsible for training to measure their own treatment adequacy and to compare anonymously the surgical quality. The Aim of this study was to assess the national surgical activity on RC after the Introduction of the register

Method

All RC data included in the SSU register between January 2019 and April 2023 were analyzed. Participation to the register was free and opened to all urologists working in Switzerland. Data (more than 80 items about tumor stage, operation type and 30-day complications as well as functional PROMS) were included prospectively via an electronic database. Of the 1067 cystectomies recorded during this period, 946 were RC for BC. A demographic analysis was performed as well as a study of the surgical approaches and morbidity

Results

Of the 946 patients included, 76% were male. The median age was 72 years (IQR 64-78). Most patients were active or former smokers (60%). Neoadjuvant treatment was performed in 270 patients (28.5%), of which 85% received chemotherapy. The most common surgical approach was open (n = 580, 62%), while 37% (n = 342) were robotic assisted. 70% of urinary diversions were ileal conduits, and 21% were orthotopic bladder substitutes. The median length of hospital stay was 15 days (IQR 12-19) and the median operation time was 332.5 min (IQR 255-392). 30-days complication were registered in 54% of patients (n = 511). Number of registered cases increased over the four years observed (2019 n = 36, 2020 n = 211, 2021 n = 312, 2022 n = 329). A discrepancy in the data was found in almost 10% of cases, and some data were missing in around 5% of individuals, underpowering the quality of the register.

Conclusion

This is the first analysis on RC for BC from the SSU registry. Data acquisition on complex oncologic surgery as RC requires surgical audits to improve data quality, implement changes and potentially enhance patient care

P041

Tumour heterogeneity and prognostic significance of PD-L1 expression in metastasizing urothelial bladder carcinoma

A Rodriguez-Calero[1]; V Genitsch[1]; C Herrmann[2]; A Perren[1]; S Bähler[3]; G Thalmann[3]; A Fleischmann[4]
[1] Institute of Pathology, University of Bern; [2] Cancer Registry East Switzerland; [3] Department of Urology, Inselspital Bern; [4] Institute of Pathology, Münsterlingen

Background & Aim

PD-L1 expression level in urothelial bladder cancer (UBC) predicts response to both classes of immunotherapies, targeting either PD-1 or PD-L1. However, information about intrapatient PD-L1 heterogeneity in metastasizing UBC is still limited which may affect the prediction of tumour response and the identification of the optimal tumour tissue for PD-L1 testing. The **Aim** of this study is to determine intra- and interpatient heterogeneity of and to assess overall survival (OS) according to PD-L1 expression.

Methods

Tissue microarrays contained samples from 125 primary tumours (PT) and one to three corresponding lymph node macro-metastases (LNM) derived from 125 (36 ♀, 89 ♂) cystectomies with extended lymphadenectomy between 1986 and 2014 at the Inselspital in Berne. 59 patients received adjuvant chemotherapy; no neoadjuvant chemo- or immunotherapy was given. Follow-up was prospectively according to a standard protocol at 3 and 6 months, then at 6-months intervals until 5 years, thereafter yearly. We assessed PD-L1 expression (0% - 100%) by immunohistochemistry (VENTANA SP263) for tumour cells (TC) and tumour-associated immune cells (IC), calculated mean values for all PT, LNM and metastatic tumour components (MTC) and classified them as low or high PD-L1 status (VENTANA guidelines).

Results

Median age at surgery was 69 years (range 39 - 89). Median observation time was 3.4 years (1-244 months). All PT were advanced (pT2: n=10; pT3: n=82; pT4: n=33). We evaluated a median of 35 lymph nodes (5 - 135) per patient, 35 patients had one, 17 had two and 73 had three or more LNM. Intrapatient PD-L1 expression may differ substantially between all tumour foci and correlation between a PT and its MTC was low in IC and moderate in TC (0.269 vs. 0.596). In 107 patients (85.6%), PD-L1 status was concordant in PT and MTC (low: 74.2%, high: 11.3%); six (4.8%) and 12 (9.7%) patients with discordant **Results** only had high PD-L1 status in their PT and MTC, respectively. High PD-L1 expression in IC of the MTC predicted OS best (p=0.007).

Conclusions

Intrapatient heterogeneity of PD-L1 expression is substantial in UBC and may hinder accurate patient selection for immunotherapy. Favourable survival with high PD-L1 expression in IC suggests a strong immune response against the tumour. Testing PD-L1 expression in PT and, if negative or low, sequential testing of metastases might improve patient selection for clinical trials and immunotherapies in daily practice.

P042

Uncovering risk factors of bladder stone formation in neurogenic lower urinary tract dysfunction: insights from a real-world long-term cohort

S Möhr1; K Bausch2; S Fassbind3; B Gahl2; H Seifert2
1 REHAB Basel; 2 Universität Basel & Universitätsspital Basel; 3 Kantonspital Baselland

Purpose: To investigate the incidence and risk factors for stone formation and recurrence in patients with neurogenic lower urinary tract dysfunction (NLUTD) in a real-world cohort.

Materials and Methods: A retrospective cohort study was conducted on consecutive NLUTD patients who received bladder stone treatment between 2010 and 2022. The bladder stones and recurrences were characterized, and uni- and multivariable Cox models were used to identify potential risk factors for stone recurrence.

Results: 30% of the 114 included patients experienced stone recurrences. The most common stone components were carbonate apatite phosphate and magnesium ammonium phosphate. The overall recurrence rate was 14 per 100 patient years. The highest recurrence rate was detected for neurogenic detrusor overactivity. Risk factors for stone recurrence in the multivariable analysis were intermittent and suprapubic catheterization and recurrent urinary tract infection.

Conclusions: Although in close contact with medical doctors, some NLUTD patients suffer from multiple bladder stone recurrences. Close control of bladder pressure and urinary tract infections together with restrictive application of catheters could help to reduce the risk.

P043

Wirksamkeit eines Extrakts aus Meerrettichwurzel und Kapuzinerkresse zur Prävention von Harnweginfekten bei Personen mit einer chronischen neurogenen Blasenfunktionsstörung – eine retrospektive Kohortenstudie

J Krebs1; AM Bieri2; J Wöllner2; J Pannek2
1 Schweizer Paraplegiker Forschung; 2 Schweizer Paraplegiker-Zentrum Nottwil

Ziele

Kann ein Extrakt aus Meerrettichwurzel und Kapuzinerkresse das Auftreten von Harnweginfekten (HWI) bei Personen mit einer chronischen neurogenen Blasenfunktionsstörung reduzieren?

Material und Methoden

Im klinischen Informationssystem einer Spezialklinik für Querschnittmedizin wurden Personen mit einer chronischen (> 12 Monate) neurogenen Blasenfunktionsstörung identifiziert, welche zwischen 2015 und 2020 während mindestens 12 Monaten mit einem Extrakt aus Meerrettichwurzel und Kapuzinerkresse (Angocin®, Max Zeller Söhne AG, Romanshorn, Schweiz) zur Prävention von HWI behandelt worden waren. Es wurden unter anderem folgende Daten gesammelt: Charakteristika der Personen, Blasenentleerungsart, jährliche Anzahl HWI und Antibiotikamedikation. Die jährliche Anzahl HWI wurde wie folgt kategorisiert: keine HWI, sporadische HWI (1-2 HWI/Jahr) und rezidivierende HWI (≥ 3 HWI/Jahr). Die Häufigkeit des Auftretens von HWI und Antibiotikaverschreibungen vor der Phytotherapie wurde mittels Prüfung auf marginale Homogenität und dem McNemar-Test mit den Häufigkeiten während der Therapie verglichen. Zudem wurde die Effektstärke der Therapie mit Cohen's ω berechnet.

Resultate

Es wurden die Daten von 43 Personen (8 Frauen, 35 Männer) mit einem Durchschnittsalter von 49±13 Jahren und einer medianen Dauer der neurogenen Blasenfunktionsstörung von 17.9 Jahren ausgewertet. Wegen unvollständiger Angaben zur Anzahl HWI oder frühzeitigen Abbruchs der Therapie (< 12 Monate) wurden 58 (49%), respektive 17 Personen (14%) ausgeschlossen. Der Anteil der Personen mit rezidivierenden HWI reduzierte sich während der Phytotherapie signifikant ($p < 0.0001$) von 58.1% (42.1-73.0%) auf 23.3% (11.8-38.6%) (Cohen's $\omega=0.5$), während der Anteil der Personen ohne HWI signifikant ($p=0.001$) von 14.0% (5.3-27.9%) auf 39.5% (25.0-55.6%) (Cohen's $\omega=0.2$) anstieg. Darüber hinaus war ein signifikanter ($p=0.008$) Rückgang der Antibiotikaverordnungen zu verzeichnen (Cohen's $\omega=0.3$). Wegen Nebenwirkungen wie gastrointestinale Symptome, Exanthem oder Gewichtszunahme hatten sechs Patienten die Therapie vorzeitig beendet.

Schlussfolgerungen

Die Therapie mit einem Extrakt aus Meerrettichwurzel und Kapuzinerkresse führte zu einem signifikanten und klinisch relevanten HWI-Rückgang bei Personen mit einer neurogenen Blasenfunktionsstörung. Diese Phytotherapie scheint daher eine vielversprechende Option zur Prävention von HWI in dieser Population zu sein.

P044

Exploiting metabolic adaptations in mitochondrial reprogramming of prostate cancer

V Baumgartner; S Salemi; D Eberli
Department of Urology, University Hospital Zürich, University of Zürich, Zürich, Switzerland

Introduction & **Objective**s

Drug treatment options in prostate cancer (PCa) are largely limited by the appearance of resistance due to the quick metabolic flexibility of malignant cells to adapt to stressors. We hypothesize that mitophagy (selective degradation of dysfunctional mitochondria) is a survival mechanism that ensures sustained energy production and tumour growth in PCa. Here we demonstrate that targeting the mitochondria with a potent complex I inhibitor (IACS-010759) in combination with the androgen receptor blocker apalutamide (ARN-509) inhibits mitophagy and is an efficient approach to enhance prostate cancer cell death.

Materials and Methods

Human PCa cells (PNT1A, LNCaP, C4-2, PC-3) were treated for 3 days with apalutamide, IACS-010759 and a combination. We investigated alterations in prostate cancer energy metabolism in response to drug treatment by examining bioenergetics phenotypes and mitochondrial dynamics in PCa cells. Galactose supplemented medium without glucose was used to compare the effectiveness of our drug treatment to cope with energetic stressors.

Results

Extracellular flux analysis revealed that malign PCa cells rely heavily on oxidative phosphorylation (OXPHOS) and glycolysis compared to benign PNT1A cells. Complex I inhibition led to a significant decrease in OXPHOS and conversely, upregulated glycolysis as a compensatory mechanism. Combination treatment significantly decreased viability in androgen-sensitive cell lines LNCaP and C4-2. Moreover, upon treatment mitochondrial fusion protein OPA1 was elevated. Furthermore, downregulation in fission protein p-DRP1, led to reduced mitophagy. Strikingly, glucose withdrawal inhibited a glycolytic switch and enhanced drug efficacy by depleting cellular ATP levels.

Conclusion

Metabolic reprogramming in PCa can be exploited by co-targeting the androgen-axis and mitochondria with apalutamide and IACS-010759, which halt the cancer's metabolic rewiring mechanisms, resulting in a strong antitumor effect. Forcing PCa cells to rely on OXPHOS by removing glucose could further enhance the mitochondria targeted drug effects, overcoming metabolic coping mechanisms of cancer cells.

P045

Exploiting single-cell RNA sequencing data to optimize prostate cancer patient-derived organoid models

R Dolgos; R Servant; M Manawi; R Mével; R Parmentier; L Bubendorf; H Seifert; A Mortezavi; C Rentsch; C Le Magnen
University Hospital Basel

Introduction

Patient-derived organoids (PDOs) have been associated with low success rates in the context of prostate cancer (PCa). One hypothesis is that prostate tumor cells require key signals which are lacking in the current culture conditions and may be specific to distinct PCa types. Here, we therefore **Aim**ed at defining refined PDO culture conditions that are more adapted to the unique characteristics of PCa cells.

Materials & Methods

Four single-cell RNA-sequencing (scRNA-seq) publicly-available datasets of the benign prostate and PCa were analyzed. Ligand-receptor interactions were inferred using the single-cell interactome analysis tool CellPhoneDB. Identified candidate factors were integrated in distinct medium formulations, which were compared to previously published media. Media were tested using five PCa organoid lines and their viability was determined using CellTiter-Glo 3D. Automated 384 well-plate whole-mount immunofluorescence was performed on organoids using antibodies recognizing CK5, CK8 and AR markers.

Results

We focused on cellular interactions involving receptors expressed by prostate epithelial cells and ligands expressed by any prostate cell type. These analyses led to the identification of putatively important ligands specific to epithelial prostate cells, including members of the TGFß, TNFSF, and EREG/EGFR signaling pathways. Our initial experiments identified groups of factors which improved organoid growth and viability. To identify the specific responsible factors, we next defined 11 medium formulations integrating several or single members of these families. Interestingly, NRG1 and MDK were associated with a significant increase in viability in castration-resistant (CRPC)-derived organoids but not in castration-sensitive (CSPC)-derived organoids, indicating that castration-resistant cells may require different factors for their growth. In addition, EGF improved the growth of certain CSPC organoids but not all, suggesting heterogenous factor-dependency within CSPC samples. Finally, high expression of CK8 and AR was maintained in CRPC organoids cultured with NRG1 and MDK, suggesting preservation of the luminal identity and androgen signaling.

Conclusions

We have identified factors that may improve viability of PCa PDOs, while maintaining their luminal phenotype and active androgen signaling. Our study paves the way towards advancing patient-derived organoids of PCa, providing further opportunities for translational studies.

P046

Improved prostate-specific membrane antigen (PSMA) induction using a combination of dutasteride and lovastatin in comparison to single compound treatment in vitro

A Kuzmanov1; D Eberli1; B Kranzbühler2
1 Universitätsspital Zürich, Klinik für Urologie; 2 UniversitätsSpital Zürich

Introduction & **Objective**s:
Prostate-specific membrane antigen (PSMA)-based imaging improved the detection of primary and recurrent prostate cancer. However, a low PSMA surface expression in certain patients is still a limitation for this promising diagnostic tool. Pharmacological induction of PSMA might be useful to improve this promising imaging modality. Dutasteride (Duta), generally used for the treatment of benign prostatic enlargement; and lovastatin (Lova), a compound used to reduce blood lipid concentrations were tested in the current study. We **Aim**ed to compare the individual effects of Duta and Lova on cell proliferation as well as PSMA expression. In addition, we tested if a combination treatment using lower individual concentrations of Duta and Lova can further increase PSMA induction.

Materials and Methods:
LNCaP, C4-2 and VCaP cells were treated for 7 to 14 days with different concentrations of Duta (0.25, 0.5 and 1 µM), Lova (0.5, 1, 2, 5, 10 µM) or a combination of Duta / Lova (0.125 µM Duta / 0.5 µM Lova, 0.25 µM / 0.5 µM, 0.5 µM / 0.5 µM, 0.125 µM / 1 µM, 0.25 µM / 1 µM, 0.5 µM / 1 µM). In addition to cell proliferation, PSMA surface expression was assessed using immunocytochemistry. Total PSMA and AR expression was analyzed by capillary western immunoassay (WES).

Results:
Our **Results** show that a treatment with ≤ 1 µM Duta (166 - 217 % ± 25 %) and ≥ 1 µM Lova (167 – 267 % ± 35 %) significantly ($p < 0.01$) upregulates both whole and cell surface PSMA expression in LNCaP, C4-2 and VCaP cells. Lower concentrations of Duta and Lova in combination (0.5 µM Duta / 0.5 µM Lova and 0.5 µM Duta / 1 µM Lova) can further significantly (+ 150 % ± 22) increase PSMA protein (expression compared to single compound treatment using higher concentrations in all tested cell lines (LNCaP, C4-2 and VCaP).

Conclusion:
Our study is the first one to show a significant induction of PSMA expression upon treatment of different prostate cancer cell lines with lovastatin. A combination treatment using low concentrations of dutasteride and lovastatin further enhances PSMA expression compared to single compound treatment. Short-term boosting of PSMA expression by using combinations of low toxicity compounds may prove useful to enhance the performance of PSMA-based imaging.

P047

Combating prostate cancer metastasis via exploration of its pre-metastatic niche

A Mazumdar; A Mbemba-Nsungi; V Baumgartner; T Paul Scherer; S Salemi; D Eberli
UniversitätsSpital Zürich (USZ), Zürich, Schweiz

Background and Objectives

Currently, prostate cancer (PCa) is the most common tumor type in male cancer patients, and approximately 1 in 10 men with PCa will eventually succumb to it due to metastatic disease. Additionally, the primary tumor actively modifies distant organs by secreting soluble factors and extracellular vesicles (EVs) into circulation. These factors travel to these metastasis-prone organs and alter their microenvironment so that the organs can better host disseminated tumor cells and ultimately form overt metastases. These hospitable microenvironments are termed pre-metastatic niches (PMNs) and are critical for metastasis formation. At present, PMN generation and its implications in PCa are poorly understood. Therefore, investigating how the PMN unfolds will give us a deeper understanding of the biology of PCa metastasis.

Methods and **Results**

We **Aim** to begin a series of in vivo experiments that will help establish animal models to investigate the transformation of the PCa PMN in different organs. Specifically, we will grow subcutaneous tumors in immune-deficient mouse models. We hypothesize that these tumors can secrete soluble factors and EVs into the circulation and generate a PMN.

We will challenge the functionality of the PMN through experimental metastasis assays by injecting luciferase-positive Background-matched cells in subcutaneous tumor-bearing mice and control naïve mice and see their growth in real-time. These cells would be injected intravenously and mimic circulating tumor cells. The experiment would track the effect of PMN formation, tumor cell survival, and outgrowth in different PCa metastasis-prone organs.

To demonstrate that subcutaneous tumors can deliver EVs and soluble factors into circulation, We have lentivirally transduced PCa cells to constitutively express CD9-mEmerald, which **Results** in cells producing fluorescent EVs. Upon subcutaneous injection of these tumors in vivo, we have been able to detect fluorescent tumor-derived EVs in the plasma of mice. Additional experiments are underway, pushing the boundaries of PMN exploration in prostate cancer.

Outlook

The knowledge gained from the experiments will provide us with a significant understanding of the underlying molecular and cellular mechanisms that initiate PMN formation in PCa. This would allow us to identify PCa patients at high risk of metastasis and help personalize and stratify their treatment options in the future.

P048

Identification and characterization of castration-tolerant cell populations in advanced prostate cancer using patient-derived organoids

R Parmentier1; R Servant1; J Roux2; R Mével1; L Bubendorf1; H Seifert1; C Rentsch1; C Le Magnen1
1 University Hospital Basel; 2 University of Basel

Androgen deprivation therapy (ADT) is the mainstay for treatment of advanced prostate cancer. While most patients initially respond to ADT and are referred to as castration-sensitive (CSPC), the majority of them will eventually relapse and progress to a castration-resistant (CRPC) state, which is currently incurable. Progression towards CRPC may be driven by subpopulations of cells which survive and/or emerge upon castration and are responsible for tumor relapse and heterogeneity. Here, we aim at exploiting patient-derived organoids to dissect cellular dynamics underlying response to androgen deprivation at single-cell resolution and identify putative castration-tolerant populations.
An organoid model derived from an untreated metastatic CSPC patient was generated and stably maintained in culture. Matched patients' tumor and derived organoids were characterized using targeted genomic sequencing, whole exome sequencing, immunohistochemistry, and immunofluorescence. Cell viability was measured using CellTiter-Glo 3D. Single cell transcriptomic profiles were determined 3- and 21-days post-androgen deprivation using a lipid-based multiplexing strategy (MULTI-seq) and single-cell RNA sequencing (scRNA-seq). Four additional samples obtained from advanced CSPC patients were collected and used to derive organoid cultures and perform scRNA-seq analyses.
Organoids recapitulated phenotypic and genomic features of their parental tumor sample and exhibited mutations in genes frequently altered in CSPC patients (e.g. PTEN, TP53, CTNNB1). Upon mimicking ADT conditions, organoids exhibited significant decrease of viability, indicating their sensitivity to castration and validating their use as relevant functional in vitro models. At 21 days post-androgen deprivation, scRNA-seq revealed a shift in the transcriptional profile of ADT-treated cells vs. non-treated cells with 186 genes differentially expressed, while no significant change was observed at day 3. These analyses also highlighted alterations in relevant pathways and gene expression signatures, such as the Androgen Response Signature, both in terms of their intensity and proportion within the cell population. Complementary analyses **Aim**ed at a deeper characterization of castration-tolerant populations identified in this model are ongoing.
Applying this strategy to a combination of organoid models, we anticipate to identify novel castration-tolerant cell populations with potential predictive and clinical relevance.

P049

Type-2 innate lymphoid cells (ILC2) have minor involvement in bladder tumor development

A Schneider; S Domingos-Pereira; L Polak; B Roth; D Nardelli-Haefliger; L Derré
Centre Hospitalier Universitaire Vaudois (CHUV)

Aim: Although Bacillus Calmette Guérin (BCG) therapy is one of the most successful immunotherapies for cancer, its limitations in terms of side effects and treatment failures highlight the need of novel targets to improve disease management. Our group identified a potential immunosuppressor axis with myeloid-derived suppressor cells and type-2 innate lymphoid cells (ILC2), involved in recurrence-free survival in non-muscle invasive bladder cancer (NMIBC) patients following BCG therapy. Thus, we focused on investigating the contribution of innate lymphoid cells subsets in bladder tumor development.

Methods and Results: In the orthotopic murine MB49 bladder tumor model, we used flow cytometry to characterize ILC infiltration during bladder tumor growth. Our findings revealed that ILC2 represented the predominant ILC subset in the bladder in absence of tumor with a frequency similar to that observed in the lungs, presenting the bladder as a homing site for ILC2. Upon tumor growth, type-1 innate lymphoid cells (ILC1) increased at the expense of ILC2, yet ILC2 still infiltrated the tumor. To investigate whether the presence of ILC2 at the onset of bladder tumor development could impact the anti-tumor response, we compared tumor progression in the presence or absence of ILC2. Targeting ILC2 by using either ILC2-deficient, IL-33-deficient mice, or treatments blocking IL-4 and IL-13 signaling pathways or IL-33 receptor did not improve mice survival following bladder tumor challenge. To expand our characterization to bladder cancer patients, we analyzed ILC infiltration in bladder tissue samples from MIBC patients at the time of the cystectomy. No changes in ILC2 infiltration within the bladder were observed between non-tumor and tumor tissue samples. Moreover, analysis of a recently published ILC2 gene signature in overall survival using bladder cancer data from The Cancer Genome Atlas (TCGA) further supported the hypothesis that ILC2s may not play a major role in patient outcomes.

Conclusion: Overall, these Results suggest that ILC2 may not contribute significantly to bladder tumor development. However, investigating ILC2 upon BCG therapy may shed light on their involvement in the underlying mechanisms of BCG therapy, potentially leading to its improvement.

P050

Deciphering the neoantigen landscape in bladder cancer patients

S Nguyen1; V Cesson1; S Benmerzoug1; A Schneider1; S Domingos-Pereira1; L Polak1; S Rodrigues-Dias1; F Dartiguenave1; I Lucca1; B Roth1; D Nardelli-Haefliger1; L Derré2
1 Urology Research Unit and Urology Biobank, Centre Hospitalier Universitaire Vaudois (CHUV); 2 CHUV-Lausanne University Hospital

Bladder cancer (BCa) is a public health concern due to its prevalence, high risk of recurrence and associated cost of management. Although Bacillus Calmette-Guérin (BCG) instillations is the gold-standard treatment for non-muscle invasive BCa (NMIBC), repeated BCG treatments are associated with significant side effects and failure, underlying the necessity for better understanding of T-cell responses generated within bladder mucosa to design new treatment. Cancer mutations theoretically represent ideal targets for cancer immunotherapy as they combine a favorable safety due to the lack of their expression in healthy tissues and their capability of high immunogenicity as they are not affected by central tolerance mechanisms. Recent advances in next-generation sequencing and computational prediction allowed the rapid and affordable characterization of genetic alterations in tumor and the identification of resulting neoantigen (neoAg). BCa is highly mutated, suggesting that it may generate numerous neoAg. Thus, the goal of this project is to characterize neoAg-specific CD8 T cells from BCa patients.
Tumor infiltrating lymphocytes from fresh tumor samples, peripheral blood mononuclear cells (PBMC) and urinary T-cell lines from BCG-treated NMIBC were established from 15 NMIBC and 9 muscle-invasive BCa patients. Genomic DNA from tumor tissue was isolated and subjected to whole exome sequencing. Then, somatic non-synonymous mutations were identified and neoepitope prediction was performed. Finally, candidate peptides (between 130 and 150 peptides/patient) were screened by ELISPOT for T-cell recognition. Deconvolution of positive pools were subsequently performed.
We identified CD8 TIL recognizing neoAg in about one-third of our cohort, while circulating CD8 T cells from one quarter of BCa patients exhibited reactivity against neoAg. Overall, neoAg reactivity was identified in 9 out of 24 patients irrespective of the T-cell compartment. In total, we detected 10 distinct neoAg, which recognition was private and mainly discordant between TIL and PBMC. Indeed, only 2 patients exhibited the same neoepitope reactivity in both TIL and PBMC. However, no urinary NeoAg-specific T cells was detected. Interestingly, patients harboring detectable neoepitope response exhibited improved recurrence-free survival.
Overall, this study revealed the potential role of neoAg-specific T cells in BCa, which therapeutic exploitation may give rise toward patient-tailored immunotherapy.

P051

Tumor-Microenvironment Characterization of the MB49 Non-Muscle-Invasive Bladder-Cancer Orthotopic Model towards New Therapeutic Strategies

S Domingos-Pereira1; K Sathiyanadan1; L Polak1; J Haefliger1; M Schmittnaegel2; CH Ries2; P Jichlinski1; B Roth1; L Derré1; D Nardelli-Haefliger1
1 Centre Hospitalier Universitaire Vaudois, CHUV; 2 Roche Innovation Center Munich

Introduction and **Aim**: Bacillus Calmette-Guérin (BCG) instillations for the treatment of non-muscle-invasive bladder cancer (NMIBC) patients can result in significant side effects and treatment failure. Immune checkpoint blockade and/or decreasing tumor-infiltrating myeloid suppressor cells may be alternative or complementary treatments. Here, we have characterized immune cell infiltration and chemoattractant molecules in mouse orthotopic MB49 bladder tumors.

Methods: Immune cell infiltration and chemokines were determined in growing tumors by flow cytometry and chemokine-array, respectively. Treatment efficacy was assessed in mice bearing MB49 bladder tumors.

Results: Our data show a 100-fold increase in CD45+ immune cells from day 5 to day 9 tumors including T cells and mainly myeloid cells. Both monocytic myeloid-derived suppressor-cells (M-MDSC) and polymorphonuclear (PMN)-MDSC were strongly increased in day 9 tumors, with PMN-MDSC representing ca. 70% of the myeloid cells in day 12 tumors, while tumor associated macrophages (TAM) were only modestly increased. The kinetic of PD-L1 tumor expression correlated with published data from patients with PD-L1 expressing bladder tumors and with efficacy of anti-PD-1 treatment, further validating the orthotopic MB49 bladder-tumor model as suitable for designing novel therapeutic strategies. Comparison of chemoattractants expression during MB49 bladder tumors grow highlighted CCL8 and CCL12 (CCR2-ligands), CCL9 and CCL6 (CCR-1-ligands), CXCL2 and CXCL5 (CXCR2-ligands), CXCL12 (CXCR4-ligand) and antagonist of C5/C5a as potential targets to decrease myeloid suppressive cells. Data obtained with a single CCR2 inhibitor however showed that the complex chemokine crosstalk would require targeting multiple chemokines for anti-tumor efficacy.

Conclusion: Altogether our data point to the orthotopic MB49 bladder cancer model as a suitable NMIBC model to design novel anti-tumor strategies. Moreover, chemokine analysis highlighted the chemoattractants that may be targeted to decrease the immune myeloid suppressive cells in NMIBC, but also revealed a complex chemokine crosstalk, which deserves further attention to design novel anti-tumor-treatments.

P052

Patient-derived organoids identify tailored therapeutic options and determinants of plasticity in sarcomatoid urothelial bladder cancer

M Garioni[1]; L Blukacz[2]; S Nuciforo[2]; R Parmentier[1]; L Roma[3]; M Coto-llerena[4]; H Pueschel[5]; S Piscuoglio[4]; T Vlajnic[3]; F Stenner[6]; H Seifert[5]; L Bubendorf[3]; C Rentsch[5]; C Le Magnen[1]
[1] Department of Urology, Institute of Medical Genetics and Pathology, Department of Biomedicine, University Hospital Basel, University of Basel, Switzerland; [2] Department of Biomedicine, University Hospital Basel, University of Basel, Switzerland; [3] Institute of Medical Genetics and Pathology, University Hospital Basel, University of Basel, Switzerland; [4] Institute of Medical Genetics and Pathology, Department of Biomedicine, University Hospital Basel, University of Basel, Switzerland; [5] Department of Urology, University Hospital Basel, Basel, Switzerland; [6] Division of Medical Oncology, University Hospital Basel, Basel, Switzerland

Introduction
Sarcomatoid Urothelial Bladder Cancer (SARC) is a rare and aggressive histological subtype of bladder cancer for which experimental models are lacking and therapeutic options are limited. In this work, we successfully established the first long-term 3D organoid-like model derived from a SARC patient (SarBC-01).

Methods
Bladder cancer samples were collected from one SARC patient (SarBC-01) undergoing transurethral resection of the bladder and one conventional urothelial carcinoma (UroCa) patient undergoing cystectomy. Tumor samples were processed to generate long-term patient-derived organoid models, which were characterized using Hematoxylin and Eosin staining, immunohistochemistry (IHC), immunofluorescence, and whole exome sequencing. In vitro invasion assays and in vivo tumorigenicity assays were performed on both lines. A library of 1567 drugs (NEXUS Personalized Health Technologies,ETH Zurich,Switzerland) was tested on the organoids at single concentration. Dose-response analysis was carried out for 22 drugs. Glucocorticoid receptor expression was assessed using a bulk RNA sequencing public dataset and via IHC in an in-house cohort. Single-cell RNA sequencing was performed following the protocol for Chromium GEM v3.1 (10 xGenomics). Transcriptomic data were analyzed using R.

Results
SarBC-01 emulated aggressive morphological and phenotypical features of SARC and harbored somatic mutations in genes frequently altered in sarcomatoid tumors such as TP53, RB1 and KRAS. As compared to an organoid line derived from an UroCa patient, SarBC-01 exhibited significant higher invasive capacity in vitro and faster tumorigenicity in vivo, consistent with a more aggressive phenotype. High-throughput drug screening identified drug candidates active against SARC cells exclusively, UroCa cells exclusively, or both. Agents targeting the Glucocorticoid Receptor (GR) pathway were specifically effective in SARC cells. In two independent cohorts, GR expression was significantly higher and more frequent in SARC versus UroCa samples, suggesting that high GR expression represents a hallmark of SARC tumors. Further, glucocorticoid treatment abrogated the invasive ability of SARC cells, and led to transcriptomic changes associated with reversion of epithelial-to-mesenchymal transition at single-cell level.

Conclusions
Altogether, our study highlights the power of organoids for precision oncology and for providing key insights into factors driving rare tumor entities.

P053

Comprehensive characterization of bladder tumor microenvironment to identify potential therapeutic targets: insights from murine MB49 bladder tumor model

A Schneider; S Domingos-Pereira; L Polak; J Dagher; B Roth; D Nardelli-Haefliger; L Derré
Centre Hospitalier Universitaire Vaudois (CHUV)

Aim: In bladder cancer there is a need for the development of novel therapies with fewer side effects and better efficacy than the standard bacillus Calmette-Guerin immunotherapy. Investigating the immunoregulation involved in bladder cancer may help to identify alternative targets for immunotherapy. Thus, we studied the immune cell infiltration in the bladder upon tumor growth to elucidate the role of immune cells in bladder tumor development.

Methods: In an orthotopic murine MB49 bladder tumor model, we used histological section, flow cytometry, and Luminex assays to characterize bladder tumor progression, immune infiltration, and cytokine levels, respectively.

Results: Our findings revealed that only non-muscle invasive (NMI) tumors were observed in MB49 bladder tumor model until day 14 post tumor implantation. After Day 14, tumors progressed towards muscle invasive disease in all mice which did not survive. Ultimately, the average survival rate was 30% within 80 days post tumor implantation. Subsequent study of bladder immune infiltration showed that, without tumor, the bladder was highly infiltrated by T cells, NK cells, dendritic cells and M2 macrophages. Upon tumor growth, T cells and M1 macrophage levels increased while NK cell and M2 macrophage levels decreased. These changes indicated a shift towards a less immunosuppressive environment, yet regulatory cells still infiltrated the bladder. Then, we characterized bladder tumor infiltrating CD4 and CD8 T cells as well as Th1/Th2 cytokines. We found that while TH1 and TH2 cytokines were similar in bladder without tumor, TH1 cytokines significantly increased upon tumor growth concurrent with an increase of TH1 CD4 infiltrating T cells. However, despite this establishment of a TH1 environment, intratumor CD8 T cells progressively acquire a terminal exhaustion phenotype (PD1+TOX+TCF1neg) with tumor growth.

Conclusion: We showed that in the orthotopic MB49 bladder tumor model, despite the generation of a less immunosuppressive microenvironment in growing NMI tumors, CD8 T cells became terminally exhausted. To improve the establishment of effective anti-tumor responses, ongoing investigations aim to reverse the CD8 T cell exhaustion phenotype.

P054

Cut-offs for relapse detection in men with stage I testicular germ cell tumours during active surveillance within a prospective multicentre cohort study using either raw or housekeeper normalised miR-371a-3p serum levels

C Fankhauser[1]; M Wettstein[2]; A Christiansen[2]; C Rothermundt[3]; R Cathomas[4]; E Kaufmann[2]; S Sigg[1]; A Templeton[5]; A Hirschi-Blickenstorfer[6]; A Lorch[7]; S Gillessen[8]; T Hermanns[2]
[1] Department of Urology, Luzerner Kantonsspital, Luzern, Switzerland; [2] University of Zurich; [3] Department of Medical Oncology and Hematology, Kantonsspital St. Gallen, St Gallen, Switzerland; [4] Department of Oncology, Kantonsspital Chur, Chur, Switzerland; [5] St. Clara Research and Faculty of Medicine, University of Basel, Basel, Switzerland; [6] Onkozentrum Hirslanden, Klinik Hirslanden, Zürich, Switzerland; [7] Department of Oncology, University Hospital Zurich, University of Zurich, Zurich, Switzerland; [8] EOC Oncology Institute of Southern Switzerland, Bellinzona, Switzerland

Introduction:
MiR-371a-3p represents a novel liquid biomarker for detecting non-teratomatous germ-cell tumors (GCTs), but it is currently unclear which approach (raw Cq or housekeeper-normalized levels) and cut-off level should be used.

Methods:
In this report we compared different approaches for measuring a newly identified blood marker (miR-371a-3p) to detect disease recurrence in men with localized testis cancer during follow-up. We used a CE-certified qRT-PCR test to measure miR-371a-3p at each follow-up visit.

Results:
Recurrence of GCT was detected in 10 out of 34 men by both raw and housekeeper-normalized miR-371a-3p serum levels. The raw Cq cut-off value of < 28 resulted in only one (3%) false positive result, and no patient had two consecutive false positive Results. A relative quantity (RQ) cut-off value of > 15 resulted in six (17%) false positive Results, but no patient had two consecutive false positive Results. The RQ approach detected recurrence in one patient six months earlier than the raw Cq approach.

Discussion:
Our preliminary data suggest that this CE-certified assay is an accurate **Method** for detecting disease recurrence using the defined cut-off value, and we recommend a confirmatory second assay to prevent false positive **Results**. To avoid unnecessary scans or overtreatment, we are currently assessing assay and cut-off refinements in a prospective cohort.

P055

Differentiation of MRSA and MSSA based on volatile organic compounds (VOC) using multicapillary column ion mobility spectrometry (IMS) and electronic nose Cyranose 320.

F von Stauffenberg1; T Böselt2; J Baumbach3; AR Koczulla2; F Sommer2; M Lohoff2; R Hofmann2; J Huber2; H Heers2
1 Universitätsspital Zürich; 2 Philipps-Universität Marburg; 3 Technische Universität Dortmund

Introduction and Aim

VOCs are emitted into the environment as metabolic products of organisms. VOC analysis allows detection of urogenital cancers and infections as well as pathogen identification of various bacterial strains. IMS and the portable Cyranose 320 are established **Methods** for VOC analysis.
The **Aim** of this study was to determine whether methicillin-resistant (MRSA) and methicillin-suscetible S. aureus (MSSA) can be differentiated from the culture medium Brain Heart Infusion Broth (BHI) and from each other based on VOC analysis using IMS and Cyranose 320.

Materials and Methods

20 samples of MRSA and MSSA from stock cultures were transferred to BHI and diluted to a concentration of 10^8 CFU/ml.
Using IMS, 20 MRSA and MSSA samples each and 27 samples of non-incubated BHI were analysed. The resulting peaks were visualised and statistically analysed, allowing differentiation between groups. The peaks could be assigned to potentially corresponding organic substances using an existing database.
Cyranose 320 was used to analyse the headspace of 20 MRSA, MSSA and BHI samples each. Every sample was measured 5 times in succession. Linear discriminant analysis and calculation of Mahalanobis distance was used to differentiate between groups. Leave-one-out cross-validation was performed to determine the cross-validation value. The groups could be separated by pattern recognition.

Results

Using IMS, 19 highly significant peaks ($p < 0.001$) allowed discrimination of MRSA and BHI with sensitivity and specificity of > 90% up to 99.9% each. MSSA could be differentiated from BHI using 20 highly significant peaks with sensitivity of 92.6% up to 96.3% and specificity of 90% up to 99.9%. MRSA and MSSA could be separated based on 11 highly significant peaks with sensitivity and specificity of 90% up to 99.9% each. Two peaks were sufficient to ensure separation of all groups using a two-step decision tree.
Cyranose 320 was able to differentiate MRSA from BHI with sensitivity of 96% and specificity of 94%. Differentiation of MSSA and BHI was achieved with sensitivity of 81 % and specificity of 75%. MRSA and MSSA could be differentiated from each other with sensitivity of 100% and specificity of 91%.

Conclusion

Differentiation between MRSA, MSSA and BHI is possible with high sensitivity and specificity by using IMS and Cyranose 320. Further clinical prospective studies have to verify the Results to find a time- and cost-saving alternative to conventional diagnostics.

P056

Catheter Associated Urinary Tract Infections-Online questionnaire (CAUTI-On): status quo in central European urological care

E Arbelaez1; I Zünti1; S Tschudin-Sutter1; A Zeller2; F Halbeisen1; H Seifert1; K Bausch1
1 Universitätsspital Basel; 2 Universität Basel

Purpose

To assess and compare central European urological routine of CAUTI management in diagnostics, treatment and prophylaxis.

Methods

We distributed an anonymized online-questionnaire in collaboration with the national urological associations of France, Germany, Austria and Switzerland between January and October 2021 Consisting of demographic, general and self-assessment questions on catheter management and diagnostics, treatment and prophylaxis of CAUTI.
Analysis was performed per country and is shown as percentage of total participants per country. Comparisons were done with the Chi-Square test.

Results

In total, 424 urologists participated in this study (France n=133, Germany n=155, Austria =72, Switzerland n=81)
Most participating urologists were male and had a median age of 53 years. Except for French urologists, > 90% of participants performed catheter changes and treated catheter-related issues regularly. Swiss urologists tended to change the catheter after a longer interval (2-3 months) than their colleagues (1-2 months). The estimated number of CAUTIs was higher in France. Most diagnostic symptoms differed statistically significant between countries (e.g. burning $p=0.014$; suprapubic pain $p < 0.001$) as well as diagnostic measures taken (e.g. physical examination $p < 0.001$, urine culture $p < 0.001$). Concerning treatment, a higher number of antimicrobial prescriptions per patient as well as longer treatment schemes could be observed in French urologists. Furthermore, choice of antimicrobial substance in treatment of non-febrile and febrile CAUTI differed statistically significant between countries ($p < 0.001$ both). Nitrofurantoin/Cotrimoxazol were primarily prescribed in non-febrile and Cephalosporins/Amoxicillin in febrile CAUTI. Urologists had similar schemes ($p=0.056$) of follow-up, while prophylactic measures differed (e.g. immune stimulation $p < 0.001$).

Discussion

Management of CAUTI differed significantly between countries in diagnostics, treatment and prophylaxis. Different antimicrobial treatment could be explained by local rates of antimicrobial resistance. However, non-recommended antimicrobials or prolonged schemes were frequent. Through this, as well as by non-recommended diagnostics and prophylactic measures, rates of antimicrobial resistance and morbidity of CAUTI might increase.
This study underlines the importance of further clinical trials to improve recommendations and appropriate training in the European management of CAUTI

P057

Partial nephrectomy : is the postoperative loss of function only conditioned by loss of parenchyma?

R Villani1; O Windisch1; E Brugola2; G Trifiro'2; C Klersy3; M Mensi2; A Dal Canton3
1 Hôpitaux universitaire de Genève; 2 IRCCS Ospedale Maugeri - Pavia; 3 Università degli studi di Pavia

Introduction

Nephron-sparing surgery (enucleation or partial nephrectomy) is the gold standard for the management of pT1a renal tumors. A postoperative reduction in glomerular filtration rate (GFR) is usually seen and expected.
We Aimed to investigate wether the loss of function is only due to loss of parenchyma or if additional demographic or operative factors were involved, such as warm ischemia time (WIT).

Methods

Patients planned for open nephron-sparing surgery for pT1 tumors in the regional hospital of Voghera (IT) between January 2010 and December 2015 were included retrospectively. Demographics, imaging and intraoperative data were collected. Renal volume was assessed post-operatively based on imaging and compared to the controlateral side. 99-DTPA renal scintigraphy was obtained at least 1 year after surgery to evaluate global and side-specific GFR. Subsequently, the ratio between unilateral GFR and renal volume was calculated (GFR/rV),

Results

85 patients were eligible, 42 were excluded (loss of follow-up, refusal to participate or undergo scintigraphy, death of other causes) while 43 were included.
Mean age was 60 years, mean preoperative eGFR was 92 ml/min, tumor mean volume was 14.11 ml. Mean WIT was 18,6 min (range 12-28 min).
After surgery, the mean reduction in kidney volume was 23% in the operated group (135 vs 104 ml, $p < 0.05$); ipsilateral measured GFR was reduced by 30% (32 vs 46 ml/min, $p < 0.05$). The operated side represented 41% of the global function.
A reduction of the GFR/rV ratio was seen in the operated group (0.32 vs 0.35, $p < 0.01$), possibly suggesting a different function after surgery.
Univariate and multivariate regressions showed that WIT (< 20 minutes or ≥ 20 minutes) did not influence postoperative GFR, while loss of parenchyma volume (coeff: -0.12/ml, $p = 0.013$) , increasing age (coeff: -0.53/year, $p < 0.01$) and preoperative creatinine (coeff: -0.16/mmol/l, $p = 0.03$) were the only significant predictors.
Interestingly, when adjusted for cofounding factors, GFR/rV was similar in the two kidneys ($p = 0.87$), suggesting that parenchyma function was similar and that the loss of function was explained only by the loss of parenchyma.

Conclusions

GFR reduction associated to partial nephrectomy was mainly related to loss of parenchyma. Interestingly, WIT had no additional impact on GFR, while increasing age and higher preoperative creatinine were predictors of loss of function.

P058

Elderly patients have a worse prognosis after radical nephroureterectomy for upper tract urothelial carcinoma

MD Vartolomei[1]; M Ferro[2]; P Bove[3]; A Poreca[4]; GM Busetto[5]; F del Giudice[6]; A Antonelli[7]; N Foschi[8]; MR Racioppi[8]; R Autorino[9]; F Chiancone[10]; N Longo[11]; B Barone[11]; F Crocetto[11]; O de Cobelli[2]; R Hurle[12]; G Liguori[13]; M Borghesi[14]; F Greco[15]; L Schips[16]; M Marchioni[16]; G Lucarelli[17]; D Dutto[18]; F Colucci[18]; GI Russo[19]; A Lo Giudice[19]; E Montanari[20]; L Boeri[21]; G Simone[22]; M Rosazza[18]; S Livoti[18]; P Gontero[18]; F Soria[18]

[1] Department of Urology, Medical University of Vienna, Vienna, Austria; [2] Department of Urology, European Institute of Oncology, IRCCS, 20141 Milan, Italy; [3] Urology Unit, S. Carlo di Nancy Hospital, Rome, Italy.; [4] Urology Unit, Policlinico of Abano, Abano Terme, Italy; [5] Department of Urology and Organ Transplantation, University of Foggia; [6] Department of Maternal Infant and Urologic Sciences, "Sapienza" University of Rome, Policlinico Umberto I Hospital, 00161 Rome, Italy; [7] Department of Urology, University of Verona, Azienda Ospedaliera Universitaria Integrata of Verona, 37126 Verona, Italy; [8] Department of Urology, Fondazione Policlinico Universitario Agostino Gemelli IRCCS, Largo Francesco Vito 1, 00168 Rome, Italy; [9] Department of Urology, Rush University Medical Center, Chicago, IL 60612, USA; [10] lDepartment of Urology, A.O.R.N. A. Cardarelli, 80131 Naples, Italy; [11] Urology Unit, Department of Neurosciences and Reproductive Sciences and Odontostomatology, University of Naples "Federico II", 80131 Naples, Italy; [12] Department of Urology, IRCCS Humanitas Research Hospital, Via Manzoni 56, 20089 Rozzano, Italy; [13] Urology Clinic, Department of Medical, Surgical and Health Sciences, University of Trieste, Cattinara Hospital, Strada di Fiume, 447, 34149 Trieste, Italy; [14] Department of Urology, IRCCS Ospedale Policlinico San Martino, 16132 Genova, Italy; [15] Department of Urology, IRCCS Humanitas Gavazzeni, 24125 Bergamo, Italy; [16] Department of Medical, Oral and Biotechnological Sciences, G. d'Annunzio, University of Chieti, 66100 Chieti, Italy; [17] Urology, Andrology and Kidney Transplantation Unit, Department of Precision and Regenerative Medicine and Ionian Area, University of Bari Aldo Moro, 70124 Bari, Italy; [18] Division of Urology, Department of Surgical Sciences, San Giovanni Battista Hospital, University of Studies of Torino, Turin, Italy; [19] Department of Surgery, Urology Section, University of Catania, 95124 Catania, Italy; [20] Department of Clinical Sciences and Community Health, University of Milan, 20122 Milan, Italy; [21] Department of Urology, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, 20122 Milan, Italy; [22] Department of Urology, IRCCS Regina Elena National Cancer Institute, 00128 Rome, Italy

Introduction/Background: To investigate commonly available factors predictive of recurrence and survival in patients with upper tract urothelial carcinoma (UTUC) at high risk of death and recurrence. Patients and **Methods**: We reviewed a multicenter share database of patients with clinically nonmetastatic UTUC treated with RNU at 21 academic hospitals. Patients were included in the study only if complete records for surgical, clinical, pathological, and oncological outcomes of interest were available.

Results: In total 746 patients were included in the study, of this 401 (53.7 %) were aged >70 years at the time of the (radical nephroureterectomy) RNU. In a pre-RNU multivariable model age > 70 yrs. (HR 1.36, 95%CI 1.04-1.78, p=0.021), CIS (HR 3.25, 95%CI 1.11-9.55, p=0.031), previous bladder cancer (HR 1.56, 95%CI 1.19-2.04, p=0.001), and multifocality (HR 1.47, 95%CI 1.06-2.02, p=0.018) were found predictive factors for intravesical recurrence. Advanced age at the time of RNU was statistically significantly associated with overall survival OS and cancer-specific survival (CSS), p=0.0001. Furthermore, age was an independent predictor for worse OS (HR 2.18, 95%CI 1.52-3.12, p=0.0001) and CSS (HR 2.31, 95%CI 1.57-3.38, p=0.0001).

Conclusion: This study confirms that elderly patients who undergo RNU may have worse outcomes than younger patients, despite no significant differences in most clinical and pathological characteristics.

P059

Epithelioid Renal Angiomyolipoma: Clinical Characteristics, Treatment Modalities and Oncological Outcomes - an individual patient meta-analysis of 221 published cases

F Haselhoff; C Fankhauser; A Affentranger
Luzerner Kantonsspital (LUKS)

Background: Renal angiomyolipomas are typically considered benign, but epithelioid renal angiomyolipoma (eAML) is a rare variant with malignant potential. Due to its rarity, there is a lack of established recommendations in urological guidelines and the available litera-ture mostly consists of individual case reports or small case series. This review **Aim**s to pro-vide a comprehensive summary of patient and clinicopathological characteristics, treatment options, and oncological outcomes for patients with eAML.

Methods: PubMed database was searched for articles published before May 2022 according to the PRISMA-statement.

Results: We identified 114 studies providing single patient data of 221 patients. Women represented 133 (60%) and the median age was 43 years (IQR 34-54). At diagnosis, the ma-jority of patients (73%) had symptoms mainly flank pain (55%) and macrohematuria (18%). Twenty-six patients (18%) showed clinical signs of a tuberous sclerosis and nine patients (4%) had synchronous metastatic disease. Radical nephrectomy or partial nephrec-tomy were performed in 72% and 14% and a biopsy without surgical treatment took place in three cases (1%) due to progressing metastasis. No treatment was described in 13% of re-ports.
Follow-up was available for 184 (83%) patients after surgery with a mean follow-up dura-tion of 33 months (IQR 4-40). Recurrence after surgical treatment occurred in 71 patients (39%): 7 cases of local recurrence, 35 cases of distant metastasis and 26 patients with both local recurrence and distant metastases. Concerning all studied patients 32% showed distant metastasis (liver, lung, lymph node, peritoneum, mediastinal, bone, spleen). Twenty-three patients (14%) died within a mean of 39 months after primary treatment, and of these deaths, 87% were related to eAML.
Tumor size in imaging (CI 21.1 – 99.4; $p < 0.01$), tumor size in pathological specimen (CI 19.7 – 98.7; $p < 0.01$), necrosis (OR= 2.3; $p = 0.002$), vascular invasion (OR = 12.6; $p < 0.001$) and mitotic count (OR = 6.8; $p < 0.01$) were significantly associated with metastatic disease.

Conclusion: Despite the limitations of this analysis, including potential publication bias, it is evident that eAML possesses a significant risk of metastasis and is associated with poor survival outcomes. Further research is necessary to enhance our understanding of eAML and improve outcomes for patients suspected to have this variant among those diagnosed with angiomyolipoma.

P060

Metastatic Risk of Renal Cell Carcinoma by Primary Tumor Size and Subtype

M Pratsinis1; S Monda2; H Lui2; T Chandrasekar2; C Evans2; M Dall'Era2
1 Kantonsspital St. Gallen, Klinik für Urologie; 2 Department of Urologic Surgery, University of California Davis

Aim:
Current data on the association between tumor size, subtype, and metastases, and thresholds for intervention, for renal cell carcinoma (RCC), are largely based on single-center nephrectomy registries that may under-represent those presenting with metastatic disease. We sought to assess tumor size and histologic subtype in relation to metastatic status at presentation for patients with RCC.

Methods:
Using the Surveillance, Epidemiology and End **Results** (SEER) cancer registry data, we identified patients with a diagnosis of RCC made between 2004 and 2019, and a known size of primary tumor. We used nodal and metastatic TNM staging to assess metastatic disease at presentation. The proportion of metastatic disease across varying tumor sizes for clear cell (ccRCC), papillary (pRCC), and chromophobe (chRCC) RCC were assessed. We also examined sarcomatoid RCC and RCC with sarcomatoid features (sarcRCC). Logistic regression models were used to model the likelihood of metastatic disease for each histologic subtype.

Results:
Of 181 096 RCC patients included, 23 829 had metastatic disease. For any RCC, metastatic rates of 3.6%, 13.1%, 30.3%, and 45.1% were observed for tumors ≤4, 4–≤7, 7–≤10, and >10 cm, respectively. Metastatic rates of chRCC were low at even large sizes, 11.0% at >10 cm. In contrast, sarcRCC had high metastatic rates at all sizes, 27.1% at ≤4 cm. Metastatic rates for ccRCC and pRCC increased steadily above 3 cm. For any RCC and each evaluated subtype, tumor size was found to be associated with metastatic disease on logistic regression ($p < 0.001$).

Conclusions:
The likelihood of a renal mass being metastatic varies greatly with both its subtype and size. We report higher likelihoods of metastatic disease across tumor sizes compared with what has been reported previously. These Results may help clinicians pick appropriate thresholds for intervention and candidates for active surveillance.

P061

Swiss Society of Urology Registry for nephrectomies: the first analysis

F Crettenand[1]; R Strebel[2]; I Lucca[3]; B Roth[4]
[1] CHUV - University Hospital; [2] Kantonsspital Graubünden; [3] Bern University Hospital; [4] CHUV Centre Hospitalier Universitaire Vaudois (CHUV)

Introduction

Using registries to monitor surgical quality is a proven Method to improve surgical outcomes and increase patient safety. The Aim of this study was to assess the national surgical activity on nephrectomy (total and partial) after the Introduction of the SSU registry.

Method

All 1488 nephrectomy data included in the SSU register between January 2020 and April 2023 were analyzed. Participation to the register was free and open to all urologists working in Switzerland. Data were included prospectively via an electronic database. Anonymized data including demographic, pre-, intra-, and postoperative parameters, and complications were described.

Results

68% (1010/1488) patients were male, median age was 65 years (IQR 56-74), median renal function was 77ml/min/1.73 m² (IQR: 59-91), and median BMI 26.6 (IQR:23.9-30). Most patients were stratified as either ASA II (44%) or ASA III (47%).
Partial nephrectomy was performed in 59%, radical/total in 41%. The most common (938/1488; 63%) surgical approach was robotic assisted (transperitoneal: n=763, 81%; retroperitoneal: n=165, 18%; unknown: n=10, 1%); of these, 17 (12 transperitoneal, 5 retroperitoneal) had to be converted to open. Open partial or radical nephrectomies were performed in 452 patients (transperitoneal: n=206, 46%; retroperitoneal: n=246, 54%, 1 unknown), laparoscopic in 95 (transperitoneal: n=63, 66%; retroperitoneal: n=28, 29%; unknown: n=4, 4%). 81% of nephrectomies were mainly performed by experienced staff members, while only 288/1488 (19%) were teaching operations for residents or fellows. Surgical margins (R pos) were positive in 5% of nephrectomies, negative (R0) in 91%; surgical margins could not be assessed in 4%. Median blood loss was 130ml (IQR: 50-300), median length of hospital stay 6 days (IQR 5-8), and median operation time 164 min (IQR 120-209). 30-dys complications Clavien/Dindo grade ≥ 3 were registered in 3.8% of patients (n=57).
The number of patients entered in the registry increased annually. A problem are missing data that was present in up to 6%. Discrepancy in data and obvious data errors was relatively low (< 1%).

Conclusions

Overall, the use of registries can help improve the quality of surgical care and increase patient safety. Still, audits are mandatory to improve data quality. Moreover, the low number of teaching operations is worrying and should encourage all SSU members to better support the next generation of urologic surgeons.

P062

Bilateral same-session ureterorenoscopy : an effective and safe procedure for the treatment of bilateral urolithiasis?

M Feldman; R Villani; M Valerio; T Liernur
Hôpitaux Universitaires de Genève

Introduction

Bilateral urolithiasis requiring endoscopic treatment has been traditionally managed with staged ureterorenoscopy (URS). Although bilateral URS performed in the same session has been progressively advocated in recent years due to its supposed limited morbidity and good success rate, current evidence is still scarce. Our Aim was to assess the safety and efficacy of bilateral same-session URS in our institution.

Materials and Methods

Consecutive patients undergoing bilateral same-session URS for ureteral and kidney stones using Holmium laser in our institution between May 2020 and December 2022 were retrospectively included. Primary outcome was stone-free rate, defined as absence of significant residual fragments at intraoperative endoscopic and fluoroscopic assessment and/or no residual fragments ≥ 4 mm on postop CT-scan. Complication rate was analyzed as a secondary outcome and stratified using the Clavien classification. Patient and stone characteristics as well as operative parameters were recorded.

Results

31 patients had bilateral same-session URS, with a median age of 60 years (IQR 49-64) and a median ASA score of 2 (IQR 2-3). Median cumulative stone burden was 19 mm (IQR 11-26) with a median density of 1041 HU (IQR 739-1244). 11 patients presented with kidney stones (35%), three with ureteral stones (10%) and 17 with ureteral and kidney stones (55%). 15 patients were pre-stented (48%), three on one side and 12 on both sides. Median operative time was 96 minutes (IQR 79-114). Stone- free rate was 77%, with six patients (19%) presenting with a persistent unilateral stone and one patient (4%) with bilateral stones. Stone-free rate reached 94% after secondary treatment, which consisted of five URS, one ESWL and one medical expulsive therapy. Two patients required a third treatment (1 ESWL and 1 URS) to reach 100% stone-free rate. At first bilateral URS, 14 patients were hospitalized (45%), of which 12 were discharged on post-op day 1. Three patients presented Clavien grade 2 complications (10%; 3 post-op fever treated by antibiotics) and two patients presented Clavien grade 3 complications (6%; 2 obstructed ureteric stent requiring replacement). No mid-term complications were detected after a median follow-up of 15 weeks (IQR 5-37).

Conclusion

Bilateral same-session URS seems to be a safe and effective technique in selected cases with ureteral and kidney stones. It is associated with a high stone-free rate and limited minor complications.

P063

Pulsed Thulium:YAG laser: ready to dust all urinary stone composition types? Results from a PEARLS analysis

J Kwok[1]; E Ventimiglia[2]; V De Coninck[3]; M Corrales[4]; A Sierra[5]; F Panthier[4]; F Pauchard[6]; F Schmid[1]; M Hunziker[1]; C Poyet[1]; M Daudon[7]; O Traxer[4]; D Eberli[1]; EX Keller[1]
[1] Department of Urology, University Hospital Zurich, University of Zurich, Zurich, Switzerland; [2] Division of Experimental Oncology/Unit of Urology, Urological Research Institute, IRCCS Ospedale San Raffaele, Milan, Italy; [3] Department of Urology, AZ Klina, Brasschaat, Belgium; [4] Sorbonne Université, GRC n°20, Groupe de Recherche Clinique sur la Lithiase Urinaire, Hôpital Tenon, F-75020 Paris, France; [5] Urology Department, Hospital Clinic de Barcelona, Villarroel 170, 08036 Barcelona, Spain; [6] Urology Department, Hospital Naval Almirante Nef, Viña del Mar 2520000, Chile; [7] Sorbonne Université, Hôpital Tenon, CRISTAL Laboratory, Paris, France

Background
A novel pulsed thulium:yttrium-aluminum-garnet (p-Tm:YAG) laser has recently been introduced for clinical use. Few in vitro evaluations are available in literature, all based on artificial stone models – not on human urinary stones. The **Aim** of the present study was to evaluate whether stone dust can be obtained from all prevailing stone composition types using the p-Tm:YAG, including analysis of stone particle size after lithotripsy.

Material and Methods
Human urinary stones of 7 different compositions were subjected to in vitro lithotripsy using a p-Tm:YAG laser with 270 µm silica core fibers (Thulio®, Dornier MedTech GmbH®, Wessling, Germany). A cumulative energy of 1000 J was applied to each stone using one of three laser settings: 0.1J x 100Hz, 0.4J x 25Hz, and 2.0J x 5Hz (average power 10W). After lithotripsy, larger remnant fragments were separated from stone dust using a previously described **Method** depending on the floating ability of dust particles. Fragments and dust samples were then passed through laboratory sieves to evaluate stone particle count according to a semi-quantitative analysis relying on a previous definition of stone dust (i.e. stone particles ≤ 250 µm).

Results
The p-Tm:YAG laser was able to produce stone dust from lithotripsy up to measured smallest mesh size of 63 µm in all seven urinary stone composition types. Notably, all dust samples from all seven stone types and with all three laser settings had high counts of particles in the size range agreeing with the definition stone dust, i.e. ≤ 250 µm.

Conclusion
To the best of our knowledge, this is the first study in literature proving the p-Tm:YAG laser to be capable of dusting all prevailing human urinary stone compositions, with production of dust particles ≤ 250µm. These findings are pivotal for the broader future implementation of the p-Tm:YAG in clinical routine.

P064

Instrumental dead space and proximal working channel connector design in flexible ureteroscopy: A new concept

J Kwok[1]; V De Coninck[2]; A Pietropaolo[3]; P Juliebø-Jones[4]; E Ventimiglia[5]; T Tailly[6]; F Schmid[1]; M Hunziker[1]; C Poyet[1]; O Traxer[7]; D Eberli[1]; EX Keller[1]
[1] Department of Urology, University Hospital Zurich, University of Zurich, Zurich, Switzerland; [2] Department of Urology, AZ Klina, Brasschaat, Belgium; [3] Department of Urology, University Hospital Southampton, Southampton, UK; [4] Department of Urology, Haukeland University Hospital, Bergen, Norway ; [5] Division of Experimental Oncology/Unit of Urology, Urological Research Institute, IRCCS Ospedale San Raffaele, Milan, Italy; [6] Department of Urology, University Hospital Ghent, Belgium; [7] Sorbonne Université, GRC n°20, Groupe de Recherche Clinique sur la Lithiase Urinaire, Hôpital Tenon, F-75020 Paris, France

Background
The **Objective** of this study was to evaluate a new concept in flexible ureteroscopy: instrumental dead space (IDS). Various proximal working channel connector designs, as well as the impact of ancillary devices occupying the working channel were evaluated in currently available flexible ureteroscopes.

Material and Methods
IDS was defined as the volume of saline irrigation needed to inject at the proximal connector for delivery at the distal working channel tip. Because IDS is related to working channel diameter and length, we also reviewed proximal connector design as well as occupation of working channel by ancillary devices.

Results
IDS significantly varied between flexible ureteroscope models, ranging from 1.1 ml for the Pusen bare scopes, up to 2.3 ml for Olympus scopes with their 4-way connector ($p < 0.001$). Proximal connector designs showed a high degree of variability in the number of available Luer locks, valves, seals, angles and rotative characteristics. The measured length of the working channel of bare scopes ranged between 739 to 854 mm and significantly correlated with measured IDS ($R2 = 0.82$, $p < 0.001$). The coupling of scopes with an alternative ancillary proximal connector and the insertion of ancillary devices into the working channel significantly reduced IDS (mean IDS reduction of 0.1 to 0.5 ml; $p < 0.001$).

Conclusion
IDS appears as a new parameter that should be considered for future applications of flexible ureteroscopes. A low IDS seems desirable for clinical applications. Main factors impacting IDS are working channel and proximal connector design, as well as ancillary devices inserted into the working channel. Future studies should clarify how reducing IDS may affect irrigation flow, intrarenal pressure and direct in-scope suction, as well as evaluate the most desirable proximal connector design properties.

P065

Illumination properties of flexible ureteroscopes: an advanced comparative analysis in a kidney model from PEARLS members

J Kwok[1]; V De Coninck[2]; E Ventimiglia[3]; Y Barghouthy[4]; A Danilovic[5]; N Smyth[6]; J Brachlow[7]; F Schmid[1]; M Hunziker[1]; C Poyet[1]; O Traxer[8]; D Eberli[1]; EX Keller[1]
[1] Department of Urology, University Hospital Zurich, University of Zurich, Zurich, Switzerland; [2] Department of Urology, AZ Klina, Brasschaat, Belgium; [3] Division of Experimental Oncology/Unit of Urology, Urological Research Institute, IRCCS Ospedale San Raffaele, Milan, Italy; [4] Department of Urology, Centre Hospitalier de Valenciennes, Valenciennes, France; [5] Department of Urology, Universidade de São Paulo Hospital das Clínicas - HCUSP, Department of Urology, Hospital Alemão Oswaldo Cruz, São Paulo, Brazil; [6] University Hospital Monklands, Monkscourt Avenue, Airdrie, ML60JS, United Kingdom ; [7] Zentrum für Urologie Winterthur, Winterthur, Switzerland; [8] Sorbonne Université, GRC n°20, Groupe de Recherche Clinique sur la Lithiase Urinaire, Hôpital Tenon, F-75020 Paris, France

Objective

Optical characteristics of flexible ureteroscopes have been extensively evaluated in air. To the best of our knowledge, the effects of an enclosed cavity in the kidney collecting system in saline on light properties of ureteroscopes is unknown. The Aim of the study was to evaluate light properties in an in-vitro kidney model setting in saline, simulating the human kidney collecting system.

Design and Methods

We evaluated a series of contemporary flexible ureteroscopes including the Storz Flex-Xc and Flex-X2s, Olympus V3 and P7, Pusen 7.5F and 9.2F, as well as OTU Wiscope using a 3D printed pink in-vitro kidney model consisting of a closed spherical cavity with 20mm diameter submerged in saline. A colour spectrometer incorporating the Vishay VEML 6040 color sensor was used for lux measurements at different openings located at the centre (direct light), 45°(direct and indirect light) and 90°(indirect light only) to the axis of the scope.

Results

The maximum illuminance was at the centre opening for all scopes (range: 516 to 12058 lux at 50% brightness and 454 to 11871 lux at 100% brightness settings). For each scope, when comparing illuminance at centre vs 45° or 90°openings, the difference ranged from -43% to -92% at 50% brightness and -43% to -88% at 100% brightness settings (all $p < 0.01$). The two scopes with the highest peripheral drop were the P7 (centre vs 45°: -88%, -83%; centre vs 90°: -92%, -87% at 50% and 100% brightness respectively) and the Pusen 9.2F (centre vs 45°: -86%, -85%; centre vs 90°: -89%, -88% at 50% and 100% brightness respectively). The scope with the least peripheral drop was the Pusen 7.5F (centre vs 45°: -49%, -48%; centre vs 90°: -43%, -43% at 50% and 100% brightness respectively).

Conclusion

Illumination varies widely between ureteroscopes in an enclosed cavity in saline, with brightness differing as well within scopes at centre vs 45° and 90° positions. Scopes can have a peripheral illuminance drop as high as -92% compared to the centre, which is an undesirable property possibly impacting diagnostic **Purpose**s in ureteroscopy. Urologists should be aware of this as it may affect the choice of ureteroscopes, and choice of light brightness setting used in surgery.

P066

Unilateral urolithiasis is frequent in recurrent kidney stones formers: Results of the prospective, randomized NOSTONE trial

B Breu; B Roth; K Stritt
CHUV Centre Hospitalier Universitaire Vaudois (CHUV)

Objective

Nephrolithiasis is a worldwide health care problem with a current lifetime risk of 18.8% in men and 9.4% in women in western countries. Without a specific treatment, 5-yr and 20-yr recurrence rates are 40% and 75%, respectively. Recurrent kidney stone formers commonly present with calculi on the same side and the etiology of recurrent unilateral urolithiasis is unclear. Despite comprehensive metabolic evaluations, many patients will not be readily categorized into a treatable group. The pathophysiology of unilateral stone formation is not clearly understood. The **Aim** of this study is to retrospectively evaluate the frequency of unilateral urolithiasis and its predictive factors.

Material and Methods

We analyzed the data from the NOSTONE trial, a prospective, multicenter, double-blinded, placebo-controlled randomized trial to assess the efficacy of hydrochlorothiazide (HCT) in the prevention of recurrence in patients with recurrent calcium containing kidney stones. We identified all unilateral urolithiasis by performing an analysis of CT imaging at the beginning and at the end of the 3-year follow-up, considering the ipsilateral spontaneous stones passages and surgical stones removals as well as ipsilateral history of urolithiasis in the last 10 years.

Results

A total of 416 patients were randomized and included in the NOSTONE trial. Median follow-up was 35 months (IQR: 29 – 41); median patient age was 49 years (IQR: 39 – 55); 84/411 (20%) patients were female. 94/416 (22.5%) patients had unilateral urolithiasis during the last 10 years and the 3-year follow-up. Neither medical history nor stone history at the beginning of follow-up were significantly associated with the frequency of unilateral urolithiasis. Arterial hypertension, gout arthritis and history of upper urinary tract infection are associated with more unilateral urolithiasis; still, no statistical significance was achieved.

Conclusion

Unilateral urolithiasis in recurrent calcium containing stone formers is high. However, we did not find any predictive factors for recurrent unilateral urolithiasis both in medical history and stone history. Identification of unilateral metabolic defects in patients with recurrent unilateral urolithiasis is recommended. Study to compare the composition of urine samples from the individual renal units of patients is required in the future.

P067

Vacuum-assisted mini-percutaneous nephrolithotomy : the Geneva experience

J Ruggiero; F Schoofs; M Valerio; T Liernur
HUG Hôpitaux Universitaires de Genève

Introduction

Vacuum-assisted mini-percutaneous nephrolithotomy (vmPCNL) differs from other miniaturization techniques by offering adjustable pressure suction through the 16Fr disposable ClearPetra® sheath (Well Lead Medical Co., Ltd, China). The **Aim** of this study is to present the outcome of our initial experience.

Material and Methods

Retrospective review of all consecutive vmPCNL performed at our institution between February 2020 and March 2023 by the same surgeon. Patients included presented renal stones candidates for this technique rather than for ESWL or retrograde intrarenal surgery (RIRS). Patient and stone characteristics, operative parameters, hemoglobin decrease, stone-free status, length of stay and complication rate were analyzed. Stone-free status was defined as no residual fragments ≥ 4 mm. Patients were placed in prone or supine position. A 16Fr ClearPetra Sheath and a 11Fr nephroscope were used. Stones were fragmented using Holmium or Thulium laser. Post-operative drainage was limited to a ureteric stent positioned in an antegrade fashion at the end of the procedure, except in case of significant bleeding where a nephrostomy tube was deemed necessary. Bladder catheter was removed on post-op day 1.

Results

27 patients had vmPCNL, with a median age of 56 years (IQR 43-64) and a median BMI of 26 kg/m2 (IQR 25-31). Median maximal stone diameter was 22 mm (IQR 20-25) with a median density of 1215 HU (IQR 1023-1494). 17 were located in the pelvis (63%), 7 in the lower calyx (26%) and 3 in the upper calyx (11%). Median cumulative stone burden was 25 mm (IQR 22-35). Median operative time was 160 minutes (IQR 148-194). Median hemoglobin decrease was 16 g/l (IQR 12-26). 23 patients were stone-free (85%). Median post-op length of stay was 1 day (IQR 1-2), with 19 patients (70%) being discharged from the hospital on post-op day 1. 2 patients had a nephrostomy tube positioned at the end of the procedure due to significant bleeding, which was removed on post-op day 1 and 2, respectively. 3 patients presented Clavien grade ≥ 2 complications (11%; 2 post-op fever requiring antibiotics and 1 angioembolization of a renal pseudoneurysm on post-op day 8). There were no Clavien complications ≥ 4.

Conclusions

VmPCNL seems to be a safe and effective technique for PCNL in a subgroup of patients presenting stones of approximately 2 cm. It is associated with a high stone-free rate, low level of blood loss, short length of stay and limited minor complications.

P068

Hydrochlorothiazide and Prevention of Kidney-Stone Recurrence: Results of the NOSTONE Trial

K Stritt1; O Bonny1; D Fuster2; B Roth3
1 CHUV - University Hospital; 2 Bern University Hospital; 3 Urology Research Unit and Urology Biobank, Centre Hospitalier Universitaire Vaudois (CHUV)

BACKGROUND
Nephrolithiasis is one of the most frequent conditions affecting the kidney and characterized by a high risk of recurrence. Thiazide diuretics are widely used for kidney stone recurrence prevention, but data are limited regarding their efficacy as compared with placebo and any dose–response relationship.

METHODS
In this double-blind trial, we randomly assigned patients with recurrent calcium-containing kidney stones to 12.5 mg, 25 mg, 50 mg hydrochlorothiazide or placebo once daily. The main **Objective** was to investigate the dose–response relationship for prevention of the primary end point, a composite of symptomatic or radiologic recurrence.

RESULTS
A total of 416 patients underwent randomization, median duration of follow-up was 2.92 years. A primary end point occurred in 60 of 102 patients (59%) receiving placebo, in 62 of 105 patients (59%) receiving 12.5 mg (rate ratio, 1.33; 95% confidence interval [CI], 0.92 to 1.93), in 61 of 108 patients (56%) receiving 25 mg (rate ratio, 1.24; 95% CI, 0.86 to 1.79), and in 49 of 101 patients (49%) receiving 50 mg hydrochlorothiazide (rate ratio, 0.92; 95% CI, 0.63 to 1.36). There was no linear relationship between hydrochlorothiazide dose and the primary end point (P=0.66). Hypokalemia, gouty arthritis and new onset diabetes mellitus occurred more frequently in patients assigned to hydrochlorothiazide compared to placebo.

CONCLUSIONS
Among patients with recurrent calcium-containing kidney stones, there was no relationship between hydrochlorothiazide dose and recurrence. After a median follow-up time of almost 3 years, recurrence rates for the composite endpoint were not different between patients receiving once daily 12.5 mg, 25 mg or 50 mg hydrochlorothiazide or placebo.

P069

Telemedizinisches Proctoring als Weiterbildungsoption in der roboter-assistierten Laparoskopie: erste Erfahrungen in der Schweiz

N Abo Youssef; B Förster; C Padevit; H John
Kantonsspital Winterhur

Hintergrund & Ziele
Durch die Transformation der meisten grossen offenen Eingriffe an Niere, Blase und Prostata in die minmal invasive roboter-assistierte Laparoskopie stellen sich auch neue Herausforderungen in der Weiterbildung zum operativen Schwerpunkt. Bei fehlender Körpersprache und Blickkontakt zwischen Konsolenoperateur und Assistenz hat die Audio- und Videokommunikation einen besonders wichtigen Stellenwert. Wir stellen neue telemedizinische Technologie vor, die einen real-time standortübergreifenden Austausch von Video- und Audiomaterial zwischen Proktor und Konsolenoperateur in Weiterbildung ermöglicht.

Material und Methoden
Seit Juli 2022 wird IntuitiveHub im Rahmen laparoskopisch roboter-assistierten Operationen am Kantonsspital Winterthur standardmässig eingesetzt. Das System erlaubt das Streamen, Bearbeiten und Aufzeichnen von intraoperativen Video-, Bild- und Audiomaterial. Anhand dieser Mediendateien kann die Echtzeit-Zusammenarbeit der instruierenden Lehrperson und der auszubildenden Konsolenchirurg:in sowohl an einem direkt im Operationssaal befindlichen Bildschirm oder standortübergreifend an einem externen Arbeitsplatz/Aula erfolgen. Auch postoperativ kann das videobasierte klinische Qualitätsmanagementsystem für Fallbesprechungen und Schulungszwecken verwendet werden. Technisch erfolgt die Erfassung und Verarbeitung der Daten über eine an das Robotiksystem angekoppelte Recheneinheit, welche die Daten verschlüsselt und über das spitalinterne lokale Netzwerk weiter zur Verarbeitung an einen spitaleigenen Server leitet.

Resultate
Erste Erfahrungen zeigten einen hohen Nutzen des Systems im klinischen Alltag. Durch einen niederschwelligen einfachen Einblick in den intraoperativen Situs konnten bereits standortübergreifend Fragen aus dem Operationssaal in Echtzeit diskutiert und geklärt werden. Auch im Operationssaal war durch die Replay- und Bearbeitungsfunktion eine didaktische Anwendung möglich. Das System wurde ausserdem im Rahmen operativen Master Classes zur Live-Übertragung eingesetzt.

Schlussfolgerung
Das IntuitiveHub-System mit Echtzeit-Übertragung von intraoperativen Video-, Bild- und Audiodateien ist eine neue unterstützende telemedizinische Weiterbildungsoption. Es eröffnet neue didaktische Möglichkeiten in der Schulung von jungen Kolleginn:innen und ist ein nützliches ergänzendes Ausbildungsinstrument im klinischen Alltag.

P070

Single-use-Zirkumzisions-Stapler (Circumcys ®): Primäre Erfahrungen in der ambulanten Praxis

M Maatje; T Meissner; A Cohen
Urocare AG, Küsnacht

Titel:
Single-use-Zirkumzisions-Stapler (Circumcys ®):
Primäre Erfahrungen in der ambulanten Praxis

Hintergrund & Ziele:
Die Zirkumzision ist weltweit eine der häufigsten chirurgischen Eingriffe bei Männern.
In der Schweiz ist die Zirkumzision, ausser bei kosmetischer oder religiöser Indikation, eine kassenpflichtige Behandlung, welche ambulant verrechnet einen sehr tiefen und in der Regel nicht kostendeckenden Erlös erwirtschaftet. Entsprechend ist eine möglichst kurze Operationsdauer und dennoch eine gute und sichere Durchführung anzustreben.
Wir berichten über unsere Erfahrungen mit einem single-use Zirkumzisions-Stapler in 33 Fällen.

Material und Methoden:
In unserer urologischen Praxis haben wir in 18 Monaten (Okt. 2021 – März 2023) insgesamt 33 Patienten mittels Stapler-Zirkumzision (SZiz) in Lokalanästhesie behandelt.
Die Eingriffe wurden von 3 verschiedenen Operateuren (alle Fachärzte Urologie) im Praxis-Operationssaal durchgeführt. Sämtliche Patienten hatten eine Phimose.
Nach Setzen eines Penisblockes mittels Lidocain 1%, wird jeweils nach dorsaler Inzision des Präputiums das Gegenstück des Staplers über die Glans gelegt. Danach kann der Stapler angesetzt, das Präputium fixiert und abgetrennt werden. Nach anatomischer Indikation kann eine Frenulotomie nötig sein. Zur Sicherheit benutzen wir bei geringen Blutungen ein chirugisches HF-Gerät.
Abschliessend wird ein Fettgazeverband angelegt und es erfolgt eine klinische Überwachung in der Arztpraxis für ca. 30 Min.

Resultate:
Behandlungszeit von Lagerung bis Verband: 30 Min.
Total 33 Patienten, Alter: Durchschnitt 56,8 J. (Range 19-95J.)
Komplikationsloser Verlauf in 23 Fällen (69.7%)
Komplikationen:
- postoperative Schmerzen (VAS >5): 15% (5 Pat.)
- Kosmetische Nachresektion: 6% (2 Pat.)
- Nachblutung aus A. frenularis/Hämatom: 6% (2 Pat.)
- Wunddehiszenz mit Heilung per secundam: 3% (1 Pat.)
- Verbliebene Staplerklammern nach 1 Monat: 12% (4 Pat.)
- Wundinfekt: 3% (1 Pat.)
- Tiefe Beinvenenthrombose nach Absetzen der oAK: 3% (1 Pat.)

Schlussfolgerungen:
Nach kurzer Lernkurve erscheint die SZiz eine ausgezeichnete und sichere **Method**e, wie der Operationsaufwand bei der Zirkumzision reduziert werden kann, ohne kosmetische oder funktionale Abstriche zu riskieren. Die Materialkosten und der ökologische Fussabdruck sind wohl grösser, müssen aber den restlichen Kosten gegenübergestellt werden (OP-Saal-Kosten, Arbeitszeit, etc.).

P071

Relationship of bladder dysfunction to MRI lesions in multiples sclerosis

K Stritt; B Roth; N Grilo
CHUV Centre Hospitalier Universitaire Vaudois (CHUV)

Context and Objectives

Lower urinary tract dysfunction is often observed in patients with multiple sclerosis (MS) and has not only a major impact on quality of life, but may also be responsible for bladder dysfunction associated with an increased risk of upper urinary tract (UUT) damage. Magnetic resonance imaging (MRI) is the gold standard imaging technique for the identification of demyelinating lesions which can be used to support a clinical diagnosis of MS. However, the relationship of MRI lesions and bladder dysfunction is not clearly established. We **Aim**ed to investigated the relationship of MRI lesions and urodynamic risk factors for UUT damage.

Material and Method

We retrospectively reviewed medical records of patients with MS who underwent at least one video urodynamic study (VUDS) for primary neuro-urological work-up at the department of Neurourology of Lausanne University Hospital since 2009. We identified all MRI lesions by reviewing the radiology reports. We used a linear regression to measure the association of the location of MS lesions on MRI and the presence of urodynamic risk factor.

Results

In total, 201 MS-diagnosed patients (139 females and 62 males) who underwent a VUDS for primary neuro-urological work-up were included. Mean patient age was 51.5 years (SD: 11.5 years) and mean EDSS was 4.1 (SD: 2.1). There was no association between MRI lesion sites and the presence of at least one urodynamic risk factor for UUT damage. Taking into account the total number of MRI lesions, there is also no significant correlation with the presence of urodynamic risk factor.

Conclusion

MRI lesions are non-significantly associated with urodynamic risk factors and does not allow a risk-dependent stratification in daily neurological clinical practice to identify MS patients requiring further neuro-urological assessment and treatment.

P072

A Systematic Review of Intra- and Postoperative Complication Reporting and Grading in Urological Surgery: Understanding the Pitfalls and a Path Forward

F Kaufmann; M Furrer
Solothurner Spitäler AG

Background: Surgical outcomes and patient morbidity are often surrogate markers of health care quality and efficiency. These parameters can only be used with confidence if the reporting and grading of intra- and postoperative complications are reliable and reproducible. Without uniformity and regulation, the risk of under-reporting, and thus significant underestimation of the burden of intra- and postoperative morbidity, is high and should be of great concern to the international surgical community. Our goals were to assess the quality and utility of currently available reporting and classification systems for intra- and postoperative complications, recognise their advantages and pitfalls, discuss the overall implications of these systems for urological surgery, and identify potential solutions for future reporting and classification systems.

Methods: A comprehensive search was performed using multiple reputable databases and trial registries up to October 25, 2022. Only studies that adhered to predefined inclusion criteria were included. Study selection and data extraction were independently performed by two review authors. The review was performed according to strict Methodological guidelines in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses 2020 statement.

Results: A total of 13 papers highlighting 13 various complication systems were critically assessed in this review. All studies proposed an intra- or postoperative complication reporting or grading system that was surgically related. At present, there is no single instrument in clinical practice to account for all relevant complication data. Six of the 13 studies were clinically validated (46%) and only three studies were urology-focused (23%). Meta-analysis was not possible.

Conclusions: Current individual complication tools are flawed, so there is a need for a novel, all-inclusive, specialty-specific reporting and classification system for intra- and postoperative complications. If successfully validated and integrated worldwide, such an instrument would have the potential to play a significant role in reshaping efficiency in health care systems and improving surgical and patient quality of care.

P073

Pulsed Thulium:YAG laser: What is the ablation efficiency during lithotripsy of human urinary stones? Results from an in-vitro PEARLS study

J Kwok[1]; E Ventimiglia[2]; V De Coninck[3]; Y Barghouthy[4]; A Danilovic[5]; A Shrestha[6]; N Smyth[7]; F Schmid[1]; M Hunziker[1]; C Poyet[1]; M Daudon[8]; O Traxer[9]; D Eberli[1]; EX Keller[1]
[1] Department of Urology, University Hospital Zurich, University of Zurich, Zurich, Switzerland; [2] Division of Experimental Oncology/Unit of Urology, Urological Research Institute, IRCCS Ospedale San Raffaele, Milan, Italy; [3] Department of Urology, AZ Klina, Brasschaat, Belgium; [4] Department of Urology, Centre Hospitalier de Valenciennes, Valenciennes, France; [5] Department of Urology, Universidade de São Paulo Hospital das Clínicas - HCUSP, Department of Urology, Hospital Alemão Oswaldo Cruz, São Paulo, Brazil; [6] Department of Urology, National Academy of Medical Sciences, Bir Hospital and B&B Hospital, Gwarko Lalitpur, Nepal; [7] University Hospital Monklands, Monkscourt Avenue, Airdrie, ML60JS, United Kingdom; [8] Sorbonne Université, Hôpital Tenon, CRISTAL Laboratory, Paris, France; [9] Sorbonne Université, GRC n°20, Groupe de Recherche Clinique sur la Lithiase Urinaire, Hôpital Tenon, F-75020 Paris, France

Background
Recently, the novel pulsed thulium:yttrium-aluminum-garnet (p-Tm:YAG) laser has been introduced for clinical use. Studies found in literature so far present promising Results on p-Tm:YAG ablation efficiency, although all were based on artificial stone models (eg. BegoStone) – not on human urinary stones. The Aim of the present study was to evaluate the p-Tm:YAG ablation efficiency with human urinary stones.

Material and Methods
Two human urinary stone compositions were subjected to laser lithotripsy using a p-Tm:YAG laser generator (Thulio® ,Dornier MedTech GmbH®, Wessling, Germany): calcium oxalate monohydrate (COM) and uric acid (UA). A cumulative energy of 200 J was applied to each stone using one of three laser settings: 0.1J x 100Hz, 0.4J x 25Hz, and 2.0J x 5Hz (average power 10W). After lithotripsy, stone samples were passed through a laboratory sieve with a 250 µm mesh size opening. Ablated stone mass was calculated from the difference in weight between the pre-lithotripsy stone and post-lithotripsy remnant fragments > 250 µm. Ablation efficiency was defined as laser energy per stone mass (J/mg).

Results
Mean ablation efficiency was 26, 18, 17 J/mg (COM) and 32, 23,17 J/mg (UA) for each of the above laser settings, respectively. When considering laser settings, there was no significant difference in ablation efficiency between any of the settings for both COM and UA (ANOVA p=0.20 and p=0.28, respectively). Likewise, when considering stone composition within each laser setting, there was no significant difference in ablation efficiency between both composition types COM and UA (0.1J x 100Hz: p=0.61, 0.4J x 25Hz: p=0.24, 2.0J x 5Hz: p=0.95). There was however a non-significant pattern of better ablation efficiency for COM as compared to UA.

Conclusion
To the best of our knowledge, this is the first study showing ablation efficiency of the p-Tm:YAG laser on human urinary stones. The p-Tm:YAG appears to ablate COM and UA stones equally well, with no significant differences between differing laser settings.

P074

MINIMALLY INVASIVE PULSED RADIOFREQUENCY (PRF) ABLATION IN CHRONIC PELVIC PAIN DUE TO PUDENDAL NEUROPATHY: A NOVEL AND EFFICIENT APPROACH

F Cappellano1; G Cocco2; M Parisi2; M Pedini1; D Tagliabue1; N Fossati1; F Monni1; A Gallina1
1 EOC Lugano; 2 Mediclinic Middle East, Mediclinic Dubai/ Neurologia e Neurofisiologia,

Pudendal neuralgia is caused by inflammation, compression and traction of pudendal nerve. It may be associated with childbirth, strenuous exercise, perineal trauma, infections of urogenital tract and is also connected to age-related changes. Currently, the clinical treatments of pudendal neuralgia include
drug therapy, pudendal nerve block (NB), pudendal nerve decompression, nervous regulation by implanted or peripheral pulse generators, spinal cord electrical stimulation and more.
The Aim of this prospective study was to investigate the feasibility and to report the Results of a new procedure for the treatment of persistent and resistant pudendal neuralgia. It consists of pudendal nerve pulsed radiofrequency (PRF) ablation under neurophysiological guide and local anesthesia with a posterior trans-gluteal approach. Recent literature suggests that PRF is effective for the treatment of refractory neuropathic pain in other districts and so far, there is a lack of effective therapies to treat unresponsive chronic pelvic pain syndromes due to a pudendal neuropathy, most of them being quite invasive and costly.
The ideal and definitive clinical treatment for pudendal neuralgia has not yet been determined, even though PRF performed under neurophysiology guide represents,in our opinion, the future of minimally
invasive therapy of chronic pelvic pain due to a pudendal neuropathy. It could be the mid-step between
initial conservative therapy and the more invasive sacral root neuromodulation or pudendal nerve surgery. In association with neurophysiology guide, it represents a revolutionary minimally invasive therapy, cheap, effective and carried out on outpatient basis in 30 minutes. Compared to pudendal nerve block, PRF gives more or less the same result in terms of pain control, but with a long lasting efficacy up to 6 or more months. It improves not only pain but also the quality of life of patients.
Even though our patient's sample size is not big enough to draw definitive **Conclusions** , it represents, at our knowledge, the second most numerous clinical record in current literature and brings something new in the chronic pelvic pain therapy scenario, in terms of technique and clinical experience.

P075

PUDENDAL NERVE BLOCK (PNB) UNDER NEUROPHYSIOLOGICAL GUIDE AS A DIAGNOSTIC AND THERAPEUTIC TOOL FOR THE TREATMENT OF CHRONIC PELVIC PAIN (CPP): 16 YEARS EXPERIENCE

F Cappellano1; C Fornara2; G Ciotti2; F Monni1; M Parisi1; M Pedini; D Tagliabue1; N Fossati1; A Gallina1
1 EOC Lugano; 2 Gruppo multimedica

Chronic pelvic pain is a non-malignant pain perceived in structures related to the pelvis of either men or women. In the case of documented nociceptive pain that becomes chronic, the pain must have been continuous or recurrent for at least 6 months. Pudendal neuralgia is caused by inflammation, compression and traction of the pudendal nerve. It may be associated with childbirth, strenuous exercise, perineal trauma, infections of urogenital tract, herpes virus infections, fungal infections and also, it is connected to age-related changes. In all cases, negative cognitive, behavioral and social consequences (ICS statement) may be associated. Guided pudendal nerve blocks have been attempted in different ways by fluoroscopy with or without nerve stimulation, CT, US or with the “low tech” finger, using only anatomic landmarks. Up to today only a few authors have tried to reach the nerve under neurophysiologic guide to deliver drugs close to the nerve (as blocks can fail if drugs are not placed in close proximity). The **Aim** of this prospective study was to report the **Results** of a minimally invasive procedure for the treatment of persistent and resistant pudendal neuralgia using a very simple and effective way of targeting the nerve.

Guided pudendal nerve blocks represent the first line of diagnosis and conservative treatment for pudendal neuralgia, usually associated with oral drugs and/or physical therapy. They are performed to make a diagnosis of pudendal neuralgia, for its prognostic value (the longer pain relief after the block, the better the expected result) and mainly for its therapeutic effect. Our technique allows an accurate delivery of drugs mixture as closer as possible to the affected nerve using a easyn neurophysiologic approach with good **Results** and low costs, avoiding more invasive and expensive therapies. New drugs and stem cells are going to be introduced to improve **Results** in the treatment of pudendal neuralgia even though classic PNB still reperesent the gold standard for the initial diagnosis and therapy of pudendal neuralgia.

P076

Blackout and whiteout in flexible ureteroscopy: first report on a phenomenon observed by PEARLS members

J Kwok[1]; V De Coninck[2]; H Kamkoum[3]; F Pauchard[4]; A Shrestha[5]; V Gauhar[6]; J Brachlow[7]; F Schmid[1]; M Hunziker[1]; C Poyet[1]; O Traxer[8]; D Eberli[1]; EX Keller[1]
[1] Department of Urology, University Hospital Zurich, University of Zurich, Zurich, Switzerland; [2] Department of Urology, AZ Klina, Brasschaat, Belgium; [3] Hamad Medical Corporation, Doha, Qatar; [4] Urology Department, Hospital Naval Almirante Nef, Viña del Mar 2520000, Chile; [5] Department of Urology, National Academy of Medical Sciences, Bir Hospital and B&B Hospital, Gwarko Lalitpur, Nepal; [6] Department of Urology, Ng Teng Fong General Hospital, Singapore, Singapore; [7] Zentrum für Urologie Winterthur, Winterthur, Switzerland; [8] Sorbonne Université, GRC n°20, Groupe de Recherche Clinique sur la Lithiase Urinaire, Hôpital Tenon, F-75020 Paris, France

Objective

Imaging properties of flexible ureteroscopes have been extensively evaluated – mostly in air. No study to date evaluated the effects of varying brightness settings on image quality from ureteroscopes submerged in saline. The **Aim** of the study was to evaluate whiteout and blackout occurrences in an in-vitro kidney model.

Design and Methods

We evaluated a series of contemporary flexible ureteroscopes including the Storz Flex-Xc and Flex-X2s, Olympus V3 and P7, Pusen 7.5F and 9.2F, as well as OTU Wiscope using a 3D printed pink in-vitro kidney model consisting of a closed spherical cavity with 20mm diameter submerged in saline. Endoscopic images were captured with the tip of the ureteroscope at 5mm,10mm and 20mm distance from the inner surface of the sphere – mimicking situations frequently found in clinical routine. The complete range of brightness settings and video capture modes were evaluated for each scope – where available. Images were analysed for their histogram on the distribution of brightness values (scale range 0 to 255). Blackout and whiteout were defined as median histogram ranges from 0 to 30 and 225 to 255, respectively (image on monitor too dark or too bright for the human eye, respectively).

Results

Blackout occurred with the P7, Pusen 7.5F and WiScope at all evaluated distance settings – mostly with lowest brightness settings. Whiteout occurred with the Flex-X2s, V3 and P7 at 5mm and 10mm distance, as well as with the V3 and P7 for the 20mm distance setting – mostly with highest brightness settings. Scopes that had neither blackout nor whiteout over all brightness settings and video capture modes were the Flex-Xc and Pusen 9.2F at 5mm and at 10mm, as well as the Flex-Xc, Flex-X2s and Pusen 9.2F at 20mm distance.

Conclusion

Blackout or whiteout of images is an undesirable property that was found for several scopes, possibly impacting on diagnostic and therapeutic **Purpose**s during ureteroscopy. These observations form a guide for urologists which may impact their choice of instruments and according settings.

P077

Comparative analysis of light sources in flexible ureteroscopy: fundamental findings from a PEARLS analysis

J Kwok[1]; V De Coninck[2]; M Corrales[3]; A Sierra[4]; F Panthier[3]; E Ventimiglia[5]; V Gauhar[6]; F Schmid[1]; M Hunziker[1]; C Poyet[1]; O Traxer[3]; D Eberli[1]; EX Keller[1]
[1] Department of Urology, University Hospital Zurich, University of Zurich, Zurich, Switzerland; [2] Department of Urology, AZ Klina, Brasschaat, Belgium; [3] Sorbonne Université, GRC n°20, Groupe de Recherche Clinique sur la Lithiase Urinaire, Hôpital Tenon, F-75020 Paris, France; [4] Urology Department, Hospital Clinic de Barcelona, Villarroel 170, 08036 Barcelona, Spain; [5] Division of Experimental Oncology/Unit of Urology, Urological Research Institute, IRCCS Ospedale San Raffaele, Milan, Italy; [6] Department of Urology, Ng Teng Fong General Hospital, Singapore, Singapore

Background
Optical characteristics of flexible ureteroscopes have been extensively evaluated in air. To date, it is not known whether there might be differences with illumination properties of flexible ureteroscopes in saline, which in fact is the native operative medium in endourology. The **Aim** of the study was to evaluate light properties of contemporary ureteroscopes in air vs. saline, light distribution analysis in the endoscopic field of view, and Kelvin measurements.

Material and Methods
We evaluated a series of contemporary flexible ureteroscopes including the Storz Flex-Xc and Flex-X2s, Olympus V3 and P7, Pusen 7.5F and 9.2F, as well as OTU Wiscope using a 3D printed black target board in-vitro model submerged in saline. A colour spectrometer incorporating the Vishay VEML 6040 color sensor was used for lux and Kelvin measurements at different target board opening locations.

Results
Overall illuminance with the Storz Flex-Xc was significantly higher in saline compared to air (5679 vs. 5205 lux, $p = 0.02$). In saline, the overall illuminance significantly differed between ureteroscopes in both 50% and 100% brightness settings (both ANOVA $p < 0.001$).

For overall brightness, the Storz Flex-Xc was the brightest scope at both 50% and 100% brightness settings (5504 lux and 5679 lux respectively), followed by Pusen 9.2F (3406 lux at and 5280 lux respectively), Storz Flex-X2s (3240 lux and 4613 lux respectively), Olympus P7 (2216 lux and 4371 lux respectively), Olympus V3 (664 lux and 2374 lux respectively), OTU WiScope (288 lux and 582 lux respectively) and finally the Pusen 7.5F with the lowest illuminance readings (160 lux and 255 lux respectively).

The majority of scopes had maximum illuminance off-centre, with the skewness direction of maximum illuminance having some differences between scopes. Inter-scope comparisons revealed significant differences of mean Kelvin measurements (ANOVA $p < 0.001$).

Conclusion
Light properties are different in saline and water, and illumination varies widely between ureteroscopes. The authors suggest that future studies on brightness characteristics of flexible ureteroscopes should ideally be done in saline. Urologists should be aware of the non- centred maximal brightness and skewness of some ureteroscopes.

P078

Hyrochlorothiazide has no major impact on bone mineral density in patients with recurrent calcium containing kidney stones: a post-hoc analysis of the randomized NOSTONE trial

K Stritt1; M Bargagli2; D Fuster2; A Christe2; O Bonny1; B Roth3
1 CHUV - University Hospital; 2 Bern University Hospital; 3 CHUV Centre Hospitalier Universitaire Vaudois (CHUV)

Background: Low bone mass and fractures are highly prevalent in patients with kidney stones. Thiazide diuretics lower urine calcium and hence may preserve bone mass. No placebo-controlled randomized trial (RCT) has been conducted to examine the impact of thiazide diuretics on bone mineral density (BMD) in patients with kidney stones.

Methods: We conducted a post-hoc analysis of the NOSTONE trial to assess a range of hydrochlorothiazide (HCT) doses or placebo on bone mineral density in patients with recurrent calcium-containing kidney stones. Computed tomography (CT) attenuation was measured at T12-L3 vertebrae in Hounsfield units (HU) at baseline and the end of the study, using a previously validated approach, with lower values corresponding to lower BMD. BMD measurements were performed by two independent readers blinded to the study intervention. Random-effects linear regression models were used to investigate treatment effects on changes from baseline.

Results: BMD measurements were available in 388 of 416 (93%) randomized patients. Median follow-up time was 2.92 years. At baseline, mean BMD was directly associated with eGFR (β 0.934 HU, 95% confidence interval [CI] 0.680; 1.189, $p < 0.001$) and inversely with age (β -2.208 HU, 95% CI -2.510; -1.907, $p < 0.001$). Mean BMD decreased by 6.4±15.7 HU in the placebo group, by 5.1±15.1 in the 12.5mg HCT group (β coefficient vs placebo, 0.368 HU, 95% CI -1.735; 2.472, $p = 0.732$), by 4.1±16.3 in the 25mg HCT group (β 0.926 HU, 95% CI -1.335; 3.187, $p = 0.422$), and by 4.8±15.9 in the 50mg HCT group (β 0.699 HU, 95% CI -1.450; 2.848, $p = 0.524$). No association was observed between HCT dose and change in BMD ($p = 0.430$). The Results were confirmed in sensitivity analyses for eGFR, urinary calcium, body mass index, and in per-protocol analyses.

Conclusion: In patients with recurrent calcium-containing kidney stones, loss of bone mineral density was similar in patients receiving hydrochlorothiazide at a dose of 12.5 mg, 25 mg, or 50 mg or placebo once daily.

P079

Toxisches Schocksyndrom bei Penisabszess nach Zirkumzision - ein Fallbericht

S Fassbind; J Studer; P Spörri
Kantonsspital Baselland

Hintergrund

Das toxische Schocksyndrom ist eine Multiorganerkrankung welche durch Staphylokokken verursacht wird. Hierbei kommt es zu einer Exotoxin-vermittelten Zytokinausschüttung. Manifestationen bestehen aus Fieber, Hypotonie und diffusem erythematösem Exanthem und Multiorganversagen. Die Diagnose wird klinisch sowie durch kulturellen Erregernachweis gestellt. Neben der intensivmedizinischen Betreuung steht die systemische Antibiotikatherapie im Vordergrund.

Fallvorstellung

Im März 2023 erfolgte die notfallmässige Zuweisung eines septischen 17-jährigen Patienten durch den niedergelassenen Urologen rund eine Woche nach Zirkumzision. Der Patient zeigte sich somnolent, tachypnoeisch und hypoton. Zudem zeigte sich ein kleinmakulöses erythematöses Exanthem vom Rumpf ausgehend über den ganzen Körper mit Ausnahme vom Kopf. Lokal zeigte sich eine Schwellung im Bereich der Zirkumzisions-Naht und des proximalen Penis, sowie wenig putride, blutige Sekretion auf Druck. Noch auf der Notfallstation erfolgte die Gabe von Piperacillin/Tazobactam 4,5g. Bei differentialdiagnostischem Verdacht auf einen anaphylaktischen Schock wurde die Therapie mit Inflamac abgesetzt und Gluccocorticoide plus Tavegyl verabreicht. Anschliessend erfolgte die notfallmässige operative Sanierung. Intraoperativ wurden die Zirkumzisionsnähte zirkumferent mit der Schere eröffnet mit Entleerung von wenig Pus. Die Wunde wurde offengelassen. Postoperativ erfolgte eine intensivmedizinische Betreuung bei katecholaminpflichtigem Patienten. Die Antibiotikumtherapie wurde um Clindamycin ergänzt. Hierunter zeigte sich eine rasche Regredienz des Exanthems und eine klinische Besserung. Im intraoperativ durchgeführten Abstrich zeigte sich das Wachstum von Enterococcus faecalis und Stapylococcus aureus. Rund eine Woche später erfolgte der sekundäre Wundverschluss. Kurz darauf erfolgte die Entlassung nach Hause mit Co-Amoxicillin per os. In den darauffolgenden ambulanten Kontrollen resultierte nach abgeschlossener Wundheilung neben einem ästhetisch gutem Resultat, auch eine problemlose Miktion und intakte erektile Funktion.

Schlussfolgerung

Ein toxisches Schocksyndrom nach Zirkumzision ist eine Rarität. Die Diagnose des toxischen Schocksyndroms wird klinisch gestellt und erfolgt anhand einer körperlichen Untersuchung und einer Bakterienkultur. Eine rasche Antibiotikumtherapie und operative Sanierung sind elementar.

P080

Corpus cavernosum fibromatous tumor of the penis, a case report

A Germanou1; N Peixoto1; T De Perrot1; A Bakaric1; W Akapko2; J Birraux1; D Benamran1
1 Hôpitaux Universitaires de Genève; 2 Clinique Ambroise-Paré

Contexte et Objectifs

Fibromatous tumors of genital organs are rare, and their exact incidence remains unknown (1). This report presents the case of a young patient with a corpus cavernosum fibromatous tumor of the penis, and it is accompanied by a **Discussion** with regard to clinical, diagnostic and therapeutic aspects (2), (3).

Case Report

A 15-year-old sexually active male consulted for a painful left lateral curvature of the penis visible during erections, estimated at a 20° angulation, without any history of prior trauma. The patient presented a palpable, mobile nodular lesion of the left corpus cavernosum. Oral treatment with nonsteroidal anti-inflammatory drug was unsuccessful. Imaging studies with ultrasound and MRI of the penile shaft revealed an infiltrative hypervascular process in the cavernous corpus of unknown origin, progressing in size over three months, leading to a surgical diagnostic biopsy. The histopathological analysis favored the diagnosis of a localized fibrosis of the corpus cavernosum at the expense of the smooth muscle fibers of the vessels. A repeated intralesional injection of platelet rich plasma was conducted every 15 days for three months, associated to vacuum-therapy and phosphodiesterase 5 inhibitors. Clinical exam after every session showed a significant improvement with an almost complete regression of the lesion and a decrease of the lateral curvature.

Conclusion

A penile lump, without a history of trauma, with a progression in size over time and an imaging of hypervascularization and infiltration of the cavernous body, can lead to consider the differential diagnosis of fibromatous tumor of the penis. This rare entity should be confirmed histologically to rule out malignant lesion. Repeated platelet rich plasma injections combined to vacuum therapy and PDE5I significantly improved the curvature of the penis during short-term follow up.

P081

Case report - Uncommon manifestation of Erdheim-Chester disease with urinary tract involvement.

P Kraft1; Y Trachsel2; H John2
1 Kantonsspital Winterthur; 2 Kantonsspital Winterthur KSW

Introduction:
Erdheim-Chester disease (ECD) is a rare form of non-Langerhans cell histiocytosis. It primarily affects the bones, but it can also involve other organs. ECD can involve any part of the urinary tract, including the kidneys, ureters, bladder and urethra. The diagnosis of ECD in the urinary tract is challenging and often requires a multidisciplinary approach.

Case report (Results)
A 62-year-old male patient presented with a soft tissue lesion in the left renal sinus measuring 7x6x5 cm as well as bilateral perirenal soft tissue lesions. An initial CT-guided biopsy of the lesion in the left renal sinus revealed a non-specific histiocyte-rich inflammatory reaction with foam cells and no neoplastic cells. Immunohistochemistry was not typical of ECD. The patient was initially treated for xanthogranulomatous pyelonephritis. Over the next two years, a progressive renal impairment was observed. After interdisciplinary **Discussion**, a second CT-guided biopsy of the lesion adjacent to the left renal pelvis was performed. Histopathology revealed only histiocytic proliferation. Additional genetic assessment did not show a mutation in the MAPK signaling cascade, which is found in 70-80% of patients with ECD. However, the histopathologic findings were compatible with ECD. Based on the clinical, radiological, and histological findings ECD was diagnosed in this patient and appropriate treatment was initiated. In the meantime, obliteration of the left renal pelvis occurred and was treated by ureteral stenting. Medical treatment included the administration of a protein kinase inhibitor (i.e., cobimetinib), which led to a reduction in the size of the soft tissue lesions. Subsequently, the drug dose had to be reduced due to severe side effects. The patient then developed anemic macrohematuria. Ureterorenoscopy showed abnormal mucosa in the proximal ureter causing bleeding. A biopsy of the mucosa revealed an ulcerative granulomatous inflammation, which may represent a ureteral manifestation of ECD, and ureteral stenting is still required due to outflow obstruction.

Conclusion:
The diagnosis and management of ECD involving the kidney and ureter requires a multidisciplinary approach. The rarity of these pathologies emphasizes the importance of interdisciplinary diagnosis when clinical, radiological and histopathological findings are ambiguous.

P082

Penile fracture with bilateral corpus cavernosum involvement and complete urethral rupture: a case report.

F Bacchetta; I Lucca; B Roth; N Grilo
CHUV Centre hospitalier universitaire vaudois

Introduction

Penile fracture is a rare but severe urological emergency resulting from a tear in the fibrous layer surrounding the corpus cavernosum of the penis. It can lead to devastating consequences such as erectile and voiding dysfunction. In around 15% of cases, it may be associated with urethral injury, which complicates further management. We present a case report of penile fracture with bilateral corpus cavernosum disruption and complete urethral rupture, highlighting the importance of prompt diagnosis and appropriate surgical intervention in managing this challenging urological emergency.

Description

A 34 years old man presented to our emergency department after blunt injury to the penis during anal intercourse. The clinical status showed a swollen penis with blood at the meatus. The patient was unable to void. A retrograde urethrography was performed, revealing a massive extravasation and a suprapubic catheter was placed. Surgical repair was carried out < 24h after presentation. Intraoperatively, bilateral partial corpus cavernosum transection and complete proximal penile urethral rupture was shown, which was repaired by direct anastomosis. The transurethral catheter was withdrawn 17 days postoperatively, with a retro- and antegrade urethrography showing no significant stricture, no significant post-void residual and a maximal flow rate of 23 ml/s. Five months after the operation, the patient reported moderate erectile dysfunction with an IIEF-5 score of 14/25, which responded well to Sildenafil.

Conclusion

Correct diagnosis and prompt surgical intervention are essential for the successful management of complex penile fractures with bilateral corpus cavernosum disruption and complete urethral rupture.

P083

Is Continuous Wound Infiltration a Better Option for Postoperative Pain Management after Open Nephrectomy Compared to Thoracic Epidural Analgesia?

N Assayed Leonardi1; F Crettenand2; F Rohrer2; S Martinez Carrique2; B Roth2
1 CHUV - Hôpital universitaire; 2 Centre Hospitalier Universitaire Vaudois (CHUV)

Objectives
In the last two decades, the incidence of renal cell carcinoma has increased gradually. Despite the advancement in medical therapies, surgery remains the treatment of choice and only curative option for renal malignancies. Although minimally invasive surgical approaches have gained popularity, open nephrectomy (ON) is still performed in 25 % of cases. Postoperative pain is one of the drawbacks of ON. Thoracic epidural analgesia (TEA) is a well recognized and safe **Method** of pain management. However, epidural analgesia has potential complications and may cause hypotension that may require aminergic support. Our study **Aim**s to assess recovery and post-operative pain management using continuous wound infiltration (CWI) compared to thoracic epidural analgesia.

Methods
Patients who underwent ON within the ERAS program in our center between 2012 and 2022 were considered in this prospectively maintained retrospectively analyzed cohort study. In 69.6% of cases, pain was managed with CWI, compared to 30.4% using TEA. Data was extracted from a centralized ERAS database, and included demographic data, post-operative evolution and pain control, length of stay and costs.

Results
92 patients included in the analysis, 62 (69.9%) in CWI, compared to 28 (30.4%) in TEA. Adequate oral pain control was achieved with a median of 3 days with CWI and within 4 days with TEA (p=0.001). Pain control was better at post-operative day 0 in the TEA group (p=0.002). Opioids use was higher in the CWI group. Median time to bowel recovery was similar in both groups (p=0.03). Reported nausea was lower in the CWI group. A trend towards half-day shorter LOS was observed in patients managed with CWI (p=0.06). Use of CWI has reduced total hospital cost by nearly 40 %.

Conclusion
TEA has slightly better **Results** in terms of post-operative pain management compared to CWI following ON. However, CWI is better tolerated, causes less nausea, and earlier recovery, which could lead to a shorter length of stay. Given its simplicity and cost effectiveness, CWI should be encouraged for ON.

P084

Ventral-inlay buccal mucosal graft urethroplasty in a 44-year old female patient with recurrent urethral stricture

O Burkhardt1; H Schmid2; DS Engeler2; V Zumstein3
1 Klinik für Urologie Kantonsspital St. Gallen; 2 Kantonsspital St. Gallen; 3 Kantonsspital St Gallen

Female urethral stricture is a rare manifestation of bladder outlet obstruction in women. According to the current guidelines of the European Association of Urology, urethral dilatation should be offered as first line treatment. Intermittent self-dilatation (ISD) in case of recurrence is recommended. However, if patients wish definitive surgical treatment or are not able to perform ISD, urethroplasty can be considered. So far, there is little data available on urethroplasty in female patients. We present a case of a 44-year old female patient with a postoperative urethral stricture who underwent ventral-inlay buccal mucosal graft urethroplasty due to inability to perform ISD.

P085

Subperitoneal Leiomyoma in a male patient – a case report

S Manser; O Minder; V Besser; R Seiler; J Blarer; D Abt; S Lütolf
Spitalzentrum Biel / Centre Hospitalier Bienne, Biel / Bienne, Switzerland

Introduction

We report on a male patient with intraabdominal leiomyoma, who was managed surgically by robotic-assisted laparoscopic excision.

Case report

A 66-year-old male patient was referred to our clinic for urologic evaluation of an asymptomatic mass adjacent to the ventral bladder wall which was incidentally found in a CT scan. The patient had a history of aortic dissection, pulmonary embolism, transient ischemic attack and bilateral inguinal hernia repair. In a previous CT scan, the mass was not yet visible. In cystoscopy the mass was not visible, cytology and urinary sediment were without pathology. MRI showed a solid, subperitoneal mass of 2x2.7cm dorsomedial of the median umbilical ligament. Due to possibility of malignancy and its growth within a span of 6 years, we discussed robotic-assisted laparoscopic excision. Intraoperatively the tumor showed no contact to the median ligament or the bladder and was easily resected via blunt dissection. Operation time was 50min and there were no relevant blood loss or intraoperative complications. The patient was discharged in good health on the second postoperative day, without postoperative complications. Histology revealed a leiomyoma of 31mm without malignancy.

Discussion

Leiomyomas are benign smooth muscle cell tumors and can in principle develop in any organ with smooth muscle cells. They most commonly occur in the female gastrointestinal and genital tracts. Less common they present in the form of Leiomyomatosis peritonealis disseminata, which consists of disseminated subperitoneal formation of leiomyomas particularly in premenopausal females. Furthermore there are reports of occurrence in kidneys, gallbladders and the skin.

In males they are a very rare occurrence and only one case report of male subperitoneal Leiomyoma was found in our literature search. A more well-known, but also very rare entity of male Leiomyomas are tumors of the urinary bladder.

Symptoms are depending on the location and size of the tumor. Exact diagnosis and differentiation from malignant disease is frequently challenging. Since biopsy sampling might bear the potential of tumor spreading, so often times excision is often preferred for clarification. We showed that a robotic-assisted laparoscopic approach is feasible. Knowledge of this tumor is important for urologists, who may encounter similar cases.

P086

Fallstudie: Urogenitale Tuberkulose mit Mycobacterium bovis 21 Jahre nach BCG-Instillation bei Urothelkarzinom der Harnblase

Z Belényesi; M Zenger; S Ott; M Kurz; T Zellweger
St. Claraspital AG

Hintergrund: Eine BCG-Instillationstherapie ist die optimale Behandlung nach TUR-Blase bei Ta- und T1 Harnblasenkarzinomen mit intermediärem oder hohem Risiko, um die Rezidiv-Gefahr zu reduzieren. Nebenwirkungen während oder nach der Therapie treten in weniger als 5 % auf, insbesondere BCG-Infektionen sind mit weniger als 1 % selten. Es gibt nur wenige Fallstudien, die über eine tuberkulöse Epididymo-Orchitis als Nebenwirkung einer BCG-Instillation berichten. Diese selten auch > 10 Jahre nach Behandlungsabschluss auftreten, jedoch berichten die meisten Autoren über einen Zeitintervall von nur wenigen Monaten nach Abschluss einer BCG-Therapie.

Resultate: Wir berichten von einem heute 78-jährigen Patienten, der in den Jahren 2000 und 2001 aufgrund eines Urothelkarzinoms der Harnblase pT1 G3 (high grade) eine BCG-Instillation mit Mykobakterium bovis erhielt. 21 Jahre später stellte er sich erneut bei uns vor (nach zwischenzeitlich unauffälliger Urothelkarzinom-Nachsorge) mit einer schmerzhaften Schwellung und Verhärtung des linken Hodens. Bei klinischem Tumorverdacht erfolgte eine Ablatio testis links. Die Histologie zeigte eine schwere granulomatöse Epididymo-Orchitis mit hochgradigem Verdacht auf eine Tuberkulose ohne Malignitätsnachweis. In der weiteren Diagnostik erfolgte zusätzlich der kulturelle Erregernachweis aus der Urinkultur und einem Abszesspunktat der Prostata. Eine anti-tuberkulöse Therapie wurde sofort nach Erhalten der Tbc-Kulturen begonnen. Eine systemische Tuberkulose konnte ausgeschlossen werden. 4 Monate nach der Ablatio testis entwickelte sich in der linken Leiste ein Serom. Im Punktat dieses Seroms fiel die PCR für M. tuberculosis - Komplex positiv aus, die Kultur blieb aber ohne Wachstum von M. bovis, weswegen die Befunde als Immunrekonstitutions-Syndrom unter tuberkulostatischer Therapie gewertet wurde. Aufgrund einer INH-induzierten peripheren Polyneuropathie konnte die Standartherapie nicht verabreicht werden. Die geplante 12 Monaten andauernde alternative tuberkulostatische Therapie musste aber wegen einer Unverträglichkeit nach 11 Monaten frühzeitig abgebrochen werden.

Schlussfolgerung: Eine urogenitale Tuberkulose nach BCG-Instillationstherapie ist selten (< 1 %). Bemerkenswert am hier beschriebenen Fall ist die Latenzzeit von >20 Jahren zwischen Applikation von BCG und dem Auftreten einer Epididymo-Orchitis.

P087

Impact of early postoperative creatinine increase on mid-term renal function after cystectomy

OD Bühler
Inselspital - Universitätsspital Bern

Postoperative AKI is frequent in patients undergoing major surgery with an incidence up to 13% after major abdominal surgery.1 Postoperative AKI is associated with increased length of hospital stay, morbidity, and mortality. As mild postoperative AKI worsens long-term renal function in patients recovering from noncardiac surgery, even an AKI grade 1 according to the Kidney Disease: Improving Global Outcomes group (defined as a creatinine increase of 1.5–1.9 times from baseline within 7 days) might be relevant for long-term outcome. Clinicians often fail to appreciate the association between early increased plasma creatinine and long-term morbidity. Incidence of AKI following radical cystectomy is near 30%. In terms of kinetics, there seems to be a stabilization period after an early postoperative increase. Impairment of midterm renal function after urinary diversion is still debated. A study of 31 patients showed no significant difference in the years after radical cystectomy when comparing groups with and without postoperative AKI. Furthermore, implementation of the enhanced recovery after surgery protocols has been related to an increased risk of AKI in patients with baseline CKD. To our knowledge, changes in plasma creatinine within 24 h after surgery have not been evaluated in this population. A single, early postoperative plasma creatinine or eGFR measurement might be an option to identify patients at risk for renal dysfunction months and years after surgery. This would offer the opportunity for early protective and therapeutic measures. Therefore, we **Aim**ed to identify risk factors for postoperative renal dysfunction in this consecutive series of patients undergoing cystectomy and urinary diversion. We hypothesized that patients with an early AKI (defined as an increase in plasma creatinine of at least 50% or 26.5 lmol/L within 24 h postoperatively) have an increased risk for mid-term (12 months) renal dysfunction compared to patients without early AKI.

P088
Thrombosed varicocele: a case report

A Mendes; M Umbehr
Stadtspital Triemli Zürich

BACKGROUND
Thrombosed varicoceles are a rare entity, with very few cases reported to date. They mostly occur on the left side. Patients usually present with scrotal pain. Clinical examination and ultrasound are among the diagnostic tools [1, 2]. There is no consensus regarding further investigations, whereas coagulation assessment, exclusion of depressed venous drainage intra-abdominally (i.e. renal vein and vena cava thrombosis) and concurrent malignancies have been discussed [3]. We present a rare case of a 43-year-old man with a right-sided spontaneous asymptomatic thrombosed varicocele.

METHODS
A 43-year old man was referred to the urology department due to a hard structure in the right-sided inguinoscrotal region, incidentally discovered during self-palpation. The patient reported no pain or other symptoms. His past medical history included a right-sided inguinal hernia repair during infancy, HIV and angiomyolipomas of the kidneys.
Clinical examination revealed a painless, tortuous inguinoscrotal induration, with no features of inflammation. An ultrasound showed a tubular, hypo-echogenic inguinoscrotal inflation. MRI demonstrated a right-sided thrombosed varicocele with dilatation (max. 12 mm) of the plexus pampiniformis. There was no sign of an intra-scrotal malignancy or vena cava thrombosis. Thus, the thrombosis was classified as spontaneous. The symptom-free patient was managed conservatively.

RESULTS
One month later, the patient remained asymptomatic. The ultrasound revealed unchanged findings, with well-perfused testicles. Due to the absence of symptoms, no varicocelectomy was performed.

CONCLUSION
Thrombosed varicoceles are a very rare finding and belong to the differential diagnosis of acute scrotal pain and/or induration. The etiology often remains unclear, whereas a distinction into spontaneous versus provoked (i.e. trauma, coagulation abnormalities, abdominal depressed venous drainage, malignancy) should be considered. Diagnosis bases on clinical examination and ultrasound, whereas CT and MRI may be of use in the exclusion of provoked cases. In spontaneous cases, management can vary. Asymptomatic patients with intact testicular perfusion do not require therapy. Symptomatic patients may be treated conservatively with analgesics and physical rest. Surgical treatment by varicocelectomy may be used in cases of failed conservative therapy [1-3]. Currently, there is no recommendation for anticoagulation therapy in spontaneous cases.

P089

Obstruktion des oberen Harntraktes bei isolierter Detrusorhypertrophie ohne Restharn – Ein Fallbericht

M Egger; O Minder; S Lütolf; N Giudici; J Blarer; D Abt; R Seiler
Spitalzentrum Biel

Hintergrund: Wir berichten über eine sekundäre Obstruktion des oberen Harntraktes durch ausgeprägte Detrusorhypertrophie bei konkomitierender Prostataobstruktion und Urethrastriktur.

Fallbericht: Ein 71-jähriger Patient stellte sich mit Harnwegsinfektion (Candida glabrata) vor. Eine Computertomographie des Abdomens zeigte einen dilatierten oberen Harntrakt beidseits bis nach intramural bei Blasenwandverdickung (16mm), aber ohne jeglichen Restharn. Eine Urethrozystoskopie wies eine bulbäre Urethrastriktur, eine bilobär obstruierende Prostata und eine trabekulierte Harnblase auf. Ein JJ-Katheter links, eine Nephrostomie rechts bei nicht darstellbarem Ostium rechts und ein Dauerkatheter wurden eingelegt. Nach Ausbehandlung des Infekts wurde der Patient entlassen und subvesikal desobstruiert.

Diskussion: Bei fehlendem Restharn ist bei diesem Patienten von einer Obstruktion des vesikoureteralen Übergangs durch eine Harnblasenwandverdickung auszugehen. Eine derartige Konstellation ist im Gegensatz zur klassischen Assoziation von erhöhtem Restharnvolumen mit einer Obstruktion des oberen Harntrakts sehr selten und in der Literatur nur in einzelnen Fallberichten beschrieben.1,2 Die Blasenwandverdickung lässt sich bei diesem Patienten durch die Detrusorhypertrophie als physiologische Reaktion auf die Urethrastriktur und die Prostataobstruktion erklären.3,4 Zusätzlich ist eine infektbedingte, chronische Verdickung der Blasenwand plausibel.5 Als Risikofaktoren für die bilaterale Obstruktion des oberen Harntraktes bei subvesikalem Widerstand sind in der Literatur einerseits der erhöhte intravesikale Druck durch grosses Restharnvolumen mit konsekutiver Harnleiterobstruktion und andererseits aber auch eine Hypertrophie und Narbenbildung des Detrusormuskels, mit anatomischer Veränderung des ureterovesikalen Übergangs beschrieben.6 Letzterer Risikofaktor ist also in diesem Fall als kausale Ätiologie der Harnleiterobstruktion zu betrachten. Zur Behebung der Harntransportstörung in dieser Konstellation ist eine subvesikale Desobstruktion indiziert, nach welcher strukturelle Veränderung der Harnblasenwand potentiell reversibel sind und somit einer Behebung auch der Obstruktion des oberen Harntrakts erreicht werden kann. 7,8

P090
Polyorchidism: A case of torsion of the third testicle

BL Follah Feudjio1; R Wolf2; B Egger2; B Peiry2
1 Uroviva Spital Limmattal; 2 HFR Fribourg - Cantonal Hospital

Objective: Polyorchidism means the presence of more than two testicles which is a rare congenital anomaly of the genitourinary tract. Less than 200 cases have been reported in the literature. We report here a case of polyorchidism diagnosed following a testicular torsion.

Methods: An 11-year-old patient with a history of left retractile testis was admitted to our emergency department with acute left scrotal pain. On clinical examination, the scrotum showed slight redness on the left, significant swelling locally, and pain on palpation. An immediately performed bedside-ultrasound showed an uniform left testicle of slightly smaller size than the right one, a decreased testicular vascularisation compared to the contralateral one, the presence of a large reactive hydrocele and a spermatic cord that looked twisted.

Results: The patient underwent emergency operation: scrotal exploration on the left side showed a large hydrocele, a torsion with 2 clockwise turns of a still viable testicle showing only slight signs of suffering. The testicle was small, round, bell-shaped and showed epididymo-testicular dissociation with an epididymis just covering the testicular base. There were also four pedunculated hydatids. The exploration of the scrotal sac did not reveal any peritoneo-vaginal communication. The patient underwent left testicular de-torsion, hydatids resection and bilateral testicular fixation. Examination at two weeks follow-up suspected the presence of a supernumerary testicle on the left side. Control ultrasound confirmed the diagnosis of polyorchidism with the presence of two testicles on the left side.

Conclusion: Polyorchidism is rare but should be considered when assessing any additional scrotal mass. The recommended imagery is ultrasound or MRI. The management of uncomplicated polyorchidism is most commonly surveillance. In case of torsion, detorsion and bilateral fixation of all testes should be performed. The recommendation is to preserve the supernumerary testicle if it is viable and without signs of malignancy.

P091

Urachal carcinoma: A case report of a stage IIIB mucinous cystic carcinoma

J Engesser
KSBL Liestal/ Bruderholz

1. Abstract

Urachal carcinoma is an extremely rare and aggressive neoplasm, accounting for < 1 % of all bladder cancers. The prognosis of urachal cancer is poor. Reported 5 - yaer overall survival is estimated about 50% and the 5-yaer cancer-specific survival (CSS) is about 35 %. The urachus is a canal that drains the urinary bladder of the fetus which should close during gestation. Among the typical symptoms of urachal cancer abdominal pain, hematuria, mucinuria an recurrent bacteriuria. We report the clinical case of a 66-year-old woman with a urachal carcinoma. The patient underwent an en-bloc resection of the abdominal wall and partial cystectomy.

2. Case Presentation

A 66-year-old woman with a history of abdominal pain recurrent urinary tract infections, which did not respond to antibiotic treatment. Initial ultrasound imaging showed an irregularly mass at the upper bladder wall retropubic space (Fig1). Due to a positive family history, intestinal and ovary cancer was also taken in consideration. After performing a transurethral Biopsy, the intravesical mass was identified as adenocarcinoma intestinal type. Computed tomogra-phy revealed 7 x 6 x 7 cm supravesical mass reaching to the abdominal wall (Fig. 1). Imaging did not show any signs lymph node enlargement, or distant metastasis. Due to possible involvement of the small intestines we and the colleagues of the department of visceral surgery chose an open approach for curative resection including um-bilectomy.
Estimated blood loss was under 50 mL and operation time was 164 min. There were no intraoperative and postop-erative complications. The patient was discharged home on postoperative day 6. The final pathology was consistent with urachal carcinoma with a negative surgical margin (Fig. 2).

3. Conclusion

Over twelve months our patient is generally in good health, despite the reportedly high mortality rate of stage III urachal cancer. No long-term postoperative complication like bladder dysfunctions, hernia or clinical or clinical sug-gestions for a recurrence have been reported. The follow-up after the operation included cystoscopy including urine cytology and Computed tomography. As of today, there was no evidence of local recurrence or metastasis.
Due to its rarity and as it is often diagnosed at advanced stages Urachal carcinomas more data and case series are required to establish therapeutic guidelines.

P092

Inflammatory myofibroblastic tumor of the urinary bladder: a case report

V Haas
Kantonsspital Aarau

Background

Inflammatory myofibroblastic tumor (IMT) of the bladder is usually a benign tumor with unknown neoplastic potential. It includes a variety of entities with common histological appearance. No risk factors are known to date but the average age is 39 ±16 years and clinically patients present with hematuria. Histological findings include three basic histological patterns: myxoid/vascular, spindle cell and hypocellular fibrous. Moreover on molecular level, it shows an ALK (anaplastic lymphoma kinase) gene transformation in up to 89% of cases. Prognosis shows local recurrence in 25% and rarely distant metastasis (< 5%). Tumor resection is therapy of choice (transurethral or partial/radical cystectomy) due to the local aggressive growth1.

Case Presentation

We present a case report of a 60 year old female with hematuria and no further complaints. In the cystoscopy a solid reddish lesion of 3 cm on the posterior bladder wall was found. Cytology did not reveal any malignancy and a transurethral resection of the bladder was planned. The histological result showed an inflammatory myofibroblastic tumor. Due to the potential of aggressive growth of the tumor locally, a partial bladder resection was performed. No further myofibroblastic tumor could be detected in the histology and it was negative for ALK. The postoperative recovery was uneventful. Further monitoring with cystoscopy and CT scans are planned, initially after 3 months and thereafter annually.

Conclusion

IMT is a benign tumor with a clinically relevant potential of local recurrence. Surgical excision is the gold standard by means of TURBT or cystectomy (partial or radical). Both these options are considered appropriate given the conditions benign course. A close monitoring is mandatory.

P093
Leydig-Zell-Hyperplasie Hoden beidseits- ein Case Report

L Hühnlein; L Prause; M Kwiatkowski; S Wyler
Kantonspital Aarau

Hintergrund:
Leydigzell-Tumore machen etwa 1-3% der testikulären Neoplasien aus. Die Ätiologie und Pathogenese der Leydigzell-Tumore sind weitgehend unbekannt. Meist treten sie unilateral auf, in 3% ist ein bilaterales Auftreten beschrieben. Auffällig wird der Befund meist durch eine schmerzlose Vergrößerung des Hodens oder einen sonographischen Zufallsbefund. Die klinischen Symptome werden zumeist durch die endokrine Tumoraktivität bestimmt. Überwiegend handelt es sich um einen benignen Tumor oder Leydigzell-Knötchen. Hiervon abzugrenzen sind maligne Leydigzell-Tumore und Keimzelltumore.

Fallbericht:
Vorstellung eines 57-jährigen Patienten mit einer Gynäkomastia vera. Sonographisch zeigte sich neben einer Hodenatrophie beidseits auch eine hypoechogene Raumforderung im linken Hoden. Zur histopathologischen Differenzierung wurde die Indikation zur Enukleation des Befundes, sowie der Biopsie des kontralateralen Hodens gestellt. Auf eine Orchiektomie wurde primär verzichtet. In der histologischen Aufarbeitung zeigten sich sowohl im Schnellschnitt, als auch in der definitiven Histologie mehrere Leydigzell-Knötchen mit einer max. Grösse von 5 mm, welche differentialdiagnostisch auch einem Leydigzell-Tumor entsprechen könnten. Bei max. einer Mitosefigur pro 10 HPF, Proliferationsfraktion (Ki-67) < 1%, Abstinenz von Nekrosen und fehlendem Nachweis von infiltrativem Wachstumsmuster, Gefässinvasionen und fehlenden Hinweisen auf eine Lokal- bzw. Fernmetastasierung, wurde ein maligner Leydigzell-Tumor ausgeschlossen. Eine endokrinologische Abklärung wurde empfohlen. Es wurde eine individualisierte Nachsorge mit regelmässigen klinischen und sonographischen Kontrollen, sowie einer einmaligen MRT-Abdomen ein Jahr postoperativ festgelegt.

Diskussion:
Leydigzell-Tumore sind selten und zu einem überwiegenden Anteil von ca. 90% benigne. Gemäss einer retrospektiven Analyse von Ruf et al. (1) wurden ein infiltratives Wachstum, erhöhte mitotische Aktivität, Gefässinvasion, Nekrosen und Kernatypien als Malignitätskriterien vorgeschlagen. Bei schnellschnittkontrollierter Tumorenukleation kann auf eine radikale Orchiektomie verzichtet werden. Diese sollte jedoch bei Malignität oder Hinweis auf einen Keimzelltumor erfolgen. Ein systematisches Nachsorgeschema fehlt und ist individuell festzulegen, jedoch sollte eine weiterführende endokrinologische Abklärung (erhöhtes Testosteron und Östrogen) eingeleitet und bei V.a. Malignität ein CT-Thorax-Abdomen durchgeführt werden (2).

P094
Melanosis of the bladder- a rarity

S Hagmann; D Born; H Schmid; J Rührup
Kantonsspital St. Gallen KSSG

Melanosis of the urinary bladder is a very rare benign condition in which there is an accumulation of melanin in the urothelium and stroma. Fewer than 30 cases have been described in the literature and a pathogenesis has not been conclusively established. We report a case of a 55-year-old female patient who was diagnosed with melanosis of the urinary bladder by cystoscopy as part of an extended workup for neurogenic voiding dysfunction. The diagnosis was confirmed by biopsy and showed brown granular pigment in both urothelial and stromal cells. Malignant cells could not be detected, especially malignant melanoma could be excluded.

P095

Case report: metastatic upper tract urothelial carcinoma in situ with glandular differentiation

S Martinez Carrique1; G Müllhaupt2
1 CHUV; 2 Spital STS AG Thun

Background: Urothelial carcinoma of the upper urinary tract accounts for between 5 and 10% of all urothelial carcinomas. We report a carcinoma in situ with glandular differentiation in the left ureter, with initial unclear origin. This type of carcinoma in situ is rare and determining its origin can be difficult.

Case presentation: A 69 yo male patient with an adenocarcinoma of the colon 12 years ago, with complete remission. He consulted for pain in the left renal loge. He presented with acute renal failure. An abdominal CT showed a left hydronephrosis III° without suspicion of lesion in the upper urinary tract. The patient was referred for the placement of a pigtail. An MRI showed extrinsic compression of the left ureter by a lymphatic nodule. Following the progressive deterioration of the renal function, the patient was referred to us. The ureteral catheter was not in place and when it was changed, a first ureteroscopy was performed, showing no suspicious lesion but an impassable stenosis in the middle ureter. The ureteral catheter was lost after this stenosis and cannot be removed. Selective cytology was negative for high grade urothelial carcinoma. Tumor markers for colon cancer were normal and the patient underwent FDG-PET-CT to exclude recurrence of colon cancer, showing an intensely metabolic nodular lesion of the left common iliac (max. 20 mm), compatible with lymph node metastasis. and a suspicious lesion in the prostate. Targeted biopsies of the prostate showed a low risk Gleason 6 prostate adenocarcinoma and active surveillance was initiated. The case was presented several times to the interdisciplinary tumorboard. A second ureteroscopy to remove the dislocated DJ catheter showed a solid mass in the middle ureter. Pathological analysis showed a CIS with glandular differentiation, with differential diagnosis between urothelial vs colorectal carcinoma. By this time, the patient's left renal function was already of 3% on scintigraphy. A left nephroureterectomy with lymphadenectomy was performed showing a urothelial carcinoma pT3 pN2 cM0 R1.

Conclusion: With this case we want to emphasize the importance of differential and early diagnosis of urothelial carcinoma of the upper urinary tract. Our patient did not present any risk factors or clinical symptoms like hematuria. Unfortunately, the first urethroscopy was negative, so that suspicions were focused on a new metastasis of the known colon cancer.

P096

Alcool, cocaïne et une chute - un mauvais mélange pour la vessie : Rapport d'un cas

E Zandirad; A Reis; A Sgroi; G Herren; K Kellou
GHOL – Hôpital de Nyon

Les ruptures vésicales sont peu fréquentes (environ 1-2% des patients souffrant d'un traumatisme abdominal contondant) et le diagnostic demeure un challenge.
Nous présentons le cas d'un homme de 30 ans sans antécédents qui s'est présenté pour des douleurs abdominales sévères à la suite d'une chute de sa hauteur avec réception sur les fesses lors d'un festival. Il décrit une consommation modérée d'alcool (3 bières) et la prise de cocaïne. Il a immédiatement décrit une dyspnée transitoire accompagnée d'une douleur abdominale suivie des épisodes de vomissements.
Les paramètres vitaux étaient stables. Le status montre une sensibilité sus-pubienne, accompagnée d'une défense et détente. Le reste de l'examen est sans particularité et ne révèle aucun signe de contusion ou d'abrasion.
Le bilan biologique révèle une leucocytose à 13 G/L sans CRP et des lactates à 1,9 mmol/L.
Le CT-abdominal met en évidence une quantité modérée de liquide libre intra-abdominal dès péri-hépatique jusque dans le pelvis (densité < 20 UH).
Un sondage urinaire est réalisé (urine claire) et a permis un soulagement partiel de la douleur. La cystographie par CT montre une fuite de produit de contraste à travers une rupture vésicale intra-péritonéale.
Une laparoscopie exploratrice confirme une lacération de 3 cm au niveau du dôme qui est suturée au V-Loc de 4,0. Absence de fuite confirmée par instillation de bleu de méthylène.
Suites opératoire simples jusqu'au retrait de la sonde urinaire 5 jours plus tard, avec une forte sensibilité suspubienne après la 1ère miction. Nous répétons le CT qui confirme la persistance d'une fuite postérieure, ce qui entraîne la mise en place d'une nouvelle sonde urinaire. Le patient rentre à domicile à J8 postopératoire. Le dernier contrôle à 1 mois confirme la guérison complète et donc le sevrage définitif de la sonde urinaire. Afin de s'assurer d'absence de pathologie subjacente une cystoscopie ambulatoire est réalisée et s'avère normale.
La littérature rapport qu'une forte consommation d'alcool favoriserait la rupture spontanée de la vessie en raison de son effet diurétique et du volume important de liquide ingéré, majorant la plénitude vésicale. La cocaïne, une drogue alpha-sympathomimétique, augmente les risques de rupture associés à l'alcool par son impact sur le sphincter urétral majoré et l'expansion vésicale associée.

P097

Fallbericht: Kontrastverstärkter Ultraschall zur Beurteilung einer Nierenzyste

KF Gerritsen; G Thalmann; K Johner
Insel Gruppe AG, Inselspital, Universitätsspital Bern

Hintergrund
Eine 59-jährige weibliche Patientin mit chronischen lumbalen Rückenschmerzen wurde uns zur Beurteilung eines Zufallsbefundes an der linken Niere zugewiesen. Das MRI der Lendenwirbelsäule zur Abklärung der Rückenschmerzen zeigte eine singuläre Nierenzyste Bosniak-Klassifikation IV der linken Niere. Die Patientin hatte keine Miktionsbeschwerden, Hämaturie, Nikotinabusus oder Familienanamnese für Nierenkarzinome. Zur Evaluation der Zyste erfolgte die Diagnostik mittels MRI-Niere, CEUS-Niere[1] und entsprechender Einteilung in Bosniak-Klassifikation [2] und CEUS-Bosniak-Klassifikation [3].

Abklärungen
In der konstramittelverstärkten Sonograpie der Niere zeigte sich eine halb zystische, halb solide Läsion am linken Nierenoberpol, Gesamtdurchmesser 71x58 mm, der solide Anteil darin 40x45 mm. Insgesamt langsame Durchblutung und schwache Intensität innerhalb des soliden Anteils, ohne Pseudokapsel, untypisch für ein hellzelliges Nierenzellkarzinom [4], CEUS-Bosniak-Klassifikation IV. Im MRI-Abdomen zeigten sich polylobulierte zystische Läsionen am Oberpol der Niere mit irregulären, teils konvex vorwölbenden, KM-anreichernden Septen von > 4 mm Dicke, Bosniak-Klassifikation IV.

Therapie
Es erfolgte die Teilnephrektomie am Oberpol links über eine Lumbotomie. Die Resektion erfolgte innert Ischämizeit von 10 Minuten, mit Bergung des Präparates in toto. Die Histologie entsprach einem Nierenteilexzisat mit gemischtem epithelialen und stromalen Tumor der Niere (MEST) in Form eines adulten zystischen Nephroms (Durchmesser 7.2 cm). In toto reseziert. Minimaler Abstand zum intraparenchymatösen Resektatrand kleiner 0.1 cm.

Diskussion
Es zeigte sich eine komplizierte zystische Nierenläsion, gemäss Klassifikation einer Bosniak IV Zyste mit hohem Malignitätsrisiko entsprechend, welche korrekterweise reseziert, sich nach Resektion jedoch als benignes zystisches Nephrom herausstellte. Die CEUS-Untersuchung bietet neue diagnostische Möglichkeiten, für welche die bisherige Klassifikation nach Bosniak keine adäquate Klassifizierung erlaubt. Eine angepasste, objektivierbare Befundung für die CEUS-Untersuchung, z.B. mit Messung der maximalen Signalintensität und der Zeit bis zur maximalen Signalintensität [5], würde es evtl. ermöglichen komplizierte zystische Nierenläsionen in differenziertere Subtypen zu klassifizieren [6], mit entsprechender Konsequenz zur Indikationsstellung der chirurgischen Intervention.

P098

Multimodal treatment to clear the upper urinary tract from recurrent fungus balls in an uncontrolled diabetic male: a case report

D Harfmann; G Müllhaupt; M Wettstein
Spital Thun, Klinik für Urologie

Introduction: Upper urinary tract (UUT) fungus balls are rare and often associated with diabetes mellitus. Literature on successful eradication is sparse. This case report is about the successful clearance of UUT fungus balls in an uncontrolled diabetic male.

Case presentation: A 73-year-old male presented to the emergency department in a hyperglycemic and septic state with acute kidney failure, borderline urinary retention and bilateral hydronephrosis without an obvious radiopaque obstruction. After insertion of bilateral ureteral stents (purulent high-pressure discharge from left UUT) and microbiologic sampling we started intravenous ceftriaxon. Meanwhile, review of the past medical history revealed 8 UUT instrumentation procedures within the last year for urolithiasis and UUT fungus balls. After the blood and urine cultures of the patient were tested positive for candida albicans we initiated intravenous antifungal therapy with echinocandin along with fluconazole (ratio: higher urinary tract permeability). Due to a resistance pattern against fluconazole, antifungal therapy was switched to water-soluble intravenous Amphotericin B (AmpB). After regression of the septic state, we performed a ureterorenoscopy (URS; left pelvicocaliceal system: full of large fungus balls; right pelvicocaliceal system: flaky material) and removed the fungus balls from the left UUT. In addition, bilateral nephrostomy tubes were inserted and used to perform antegrade AmpB instillations (50 mg in 1000 ml saline, flow rate of 30 ml/h). We aggressively controlled the diabetes mellitus, alkalinized the urine with potassium citrate (ratio: yeast-like fungi do not thrive in alkaline environment) and optimized the lower urinary tract (exclusion of vesicoureteral reflux and initiation of alpha-blocker therapy). We performed a second-look URS (cleared left UUT) and removed the flaky material from the right pelvicocaliceal system. The patient was discharged after 5 antegrade AmpB instillations and 23 days of intravenous AmpB therapy. Up to date (5 months after completion of multimodal treatment), urine flow cytometry does still not show any evidence of fungi elements.

Conclusion: This case report demonstrates how multimodal treatment (complete removal of all visible fungus balls, topical and systemic antifungal therapy, urine alkalization, optimization of lower urinary tract, aggressive control of diabetes mellitus) can clear the UUT from fungus balls in an uncontrolled diabetic male.

P099

Extramammary Paget's disease of the scrotum - A case report

C Müssgens1; G Müllhaupt1; V Genitsch2; L Nowak1
1 Spital Thun, Klinik für Urologie; 2 Pathologie Länggasse

Introduction:
Extramammary Paget's disease (EMP) is a rare malignant neoplasm predominantly affecting apocrine gland-rich skin such as the scrotum and the penis in older aged men(2). EMP is associated with an increased risk of underlying malignancy of the genitourinary or gastrointestinal tract(2).

Case Report:
The 59-year-old patient was referred by the attending dermatologist due to a bioptic suspicion of an undefined epidermotopic apocrine tumor of the left scrotum. Clinically, the patient presented with a round shaped erythema (Ø ca. 1.5 cm), which has been present for 4 years. Ultrasound and blood sampling showed no further abnormalities. For further clarification, a spindle-shaped skin biopsy of 3 cm was taken from the area. Histology confirmed an EMP therefore a further local excision with a safety margin of 2 cm was indicated. Due to the increased risk of associated malignancy the diagnostic workup was completed with an intraoperative cystoscopy including cytology sampling, a thoracoabdominal CT-scan (with urography) and a gastroscopy, which all showed no pathological findings. A recent colonoscopy was inconspicuous. Final histology showed R0 resection with atypical intraepithelial cellular elements and a typical immunohistochemistry (CK7+, GATA3+). At follow-up after 3 months the patient presented asymptomatic. In the future, we are planning an individualized annual follow-up including cystoscopy, thoracoabdominal CT-scan, gastroscopy and colonoscopy.

Discussion:
There is a broad spectrum of differential diagnosis in genital erythematous lesions, therefore initial misdiagnosis is common. Approximately 10% of patients present just with erythematous lesions, without pruritus or tenderness(2). After exclusion of an underlying neoplasia, surgical tumor excision with a safety margin of at least 2 cm remains the therapy of choice(1;4). Despite R0 resection, the disease has a high recurrence rate which could possibly be reduced by Mohs surgery(4). Regarding metastatic disease, standardized chemotherapeutic regimens are lacking(1;2;4). Due to the increased risk of underlying neoplasia and high reccurence rates individualized follow-ups are important.

Conclusion:
In genital lesions with a prolonged history and an inadequate response to conventional treatment EMP should be considered and excluded by biopsy.

P100

A rare case report of a female patient with tuberous sclerosis complex and bilateral kidney tumors – description and Discussion of potential diagnostic and therapeutic pathways

M Karrer1; N Schmid2; C Poyet1; T Schachtner2; F Schmid1
1 Department of Urology, University Hospital Zurich, Frauenklinikstrasse 10, 8091 Zurich; 2 Department of Nephrology, University Hospital Zurich, Rämistrasse 100, 8091 Zurich

Background & **Aim**s: Tuberous sclerosis complex (TSC) is a rare autosomal dominant disorder with mutations in one of two tumor suppressor genes, TSC1 or TSC2. The TSC1 and TSC2 genes produce cytoplasmic heterodimers, which inhibits both mTOR-mediated cell growth and cell division. The consequence of non-existent mTOR-inhibition is characterized by the growth of benign tumors such as hamartomas in various organ systems. Renal manifestations with angiomyolipomas (AML) and renal cysts are common in patients with TSC. These may be responsible for significant morbidity and mortality in adulthood due to chronic renal failure and the increased risk of bleeding and development of renal cell carcinoma.

Materials & Methods: A young patient with TSC and known AML of the right kidney presented as an emergency due to rupture of the tumor with subsequent right flank pain and macrohematuria. She underwent emergency evacuation of the bladder tamponade and DJ catheterization on the right side due to fornix rupture. A CT scan revealed multiple, bilateral AML of the kidneys as well as multiple and partially hemorrhaged renal cysts on both sides. Furthermore, solid and hypervascular lesions of the right kidney were revealed. An MRI showed, in addition to numerous AML on both sides, multiple, partially septated, and contrast-enhancing renal cysts.

Results: Interdisciplinary tumor board decision: a) Observation of the newly diagnosed small RCC-suspect lesion postponing a biopsy for further clarification in case of growth dynamic, b) Active surveillance strategy with MRI follow-up, c) Trial of systemic medical therapy with everolimus, d) Selective arterial embolization in case of bleeding needs to be favored over of a surgical approach.

Discussion & **Conclusion**: For regular follow-ups of renal lesions, MRI examination of the abdomen is the preferred imaging modality. Tumor-suspected renal lesions should always be presented and discussed at an interdisciplinary tumor board meeting to define a procedure. Because of the large AML and young patient age, selective arterial embolization should be evaluated instead of a surgical approach. Systemic therapy with everolimus may achieve significant volume reduction of AML and thus avoid complications. The toxicity and an active desire to have children should always be considered and discussed with the patient. Patients with TSC need lifelong follow-ups with regular imaging and interdisciplinary care.

P101

Very late out-of-field relapse of testicular mixed germ cell tumour – a case report

A Neuenschwander; M Pratsinis; B Denecke; S Fischer; A Enzler-Tschudy; H Schmid; D Engeler; C Babst
Kantonsspital St. Gallen

Background
Testicular germ cell tumours (TGCT) are the most common malignancy in young adult men. However, recurrence remains a challenge in clinical practice.
We report a rare case of contralateral inguinal very late relapse (VLR) of a non seminomatous testicular germ cell tumour (NSGCT) over 9 years after initial presentation, which occurs in about 1% of patients and is associated with poor prognosis.

Case Report
A 47-year-old man underwent a right inguinal orchiectomy and biopsy of the left testis in 2013. The histopathology revealed a mixed germ cell tumor (seminoma, mature teratoma, immature teratoma) with no lymphovascular invasion (LVI). Contralateral biopsy of testis showed no evidence of a tumour. Tumour markers were normal. He was diagnosed with Clinical Stage I (CS I) NSGCT and opted for active surveillance. Follow-up was conducted with regular imaging, sonography of the contralateral testis, and measurement of tumor markers.
After 9 years of normal follow-up, the patient presented with a large inguinal lymphadenopathy on the contralateral left side. A CT scan showed two enlarged lymph nodes in the left inguinal region, but no further metastasis was found. A biopsy documented presence of seminoma. The patient underwent a left inguinal lymph node excision. Histopathological examination showed only evidence of seminoma. Despite initial presence, no components of teratoma were detected.
Imaging will be repeated to assess residual disease or further systemic spread before making a final decision regarding additional therapy.

Discussion
Out-of-field VLR of TGCT is a rare event with limited data in the current literature. Involvement of the inguinal lymph nodes on the contralateral side is extremely uncommon. In CS I NSCGT a higher rate of LR is seen in patients managed by surveillance compared to induction chemotherapy. Different studies have tried to identify risk factors for LR but so far only the presence of LVI in the orchiectomy specimen has been shown to be a predictor of recurrence in CS I NSGCT.
Some authors propose lifetime follow-up (physical exam, tumor markers) in patients with active surveillance, others emphasize that extending surveillance for all for the benefit of the few may not add overall value.

Conclusion
Having such limited cases reported in the literature, long-term prospective databases should be maintained to further identify risk factors for VLR and out-of-field relapse in order to offer the best treatment option.

P102

Checkpoint inhibition for castration-resistant prostate cancer – a case report

J Bühler1; K Koster1; M Pratsinis1; V Zumstein2; K Süveg1; W Jochum1; D Husarik1; A Omlin3
1 Cantonal Hospital of St. Gallen, St. Gallen, Switzerland; 2 Urologie Zug, Zug, Switzerland; 3 Onkozentrum Hirslanden, Zürich, Switzerland

Case presentatio

Presentation of a 77-year-old men with elevated PSA (17.3 ug/l) in July 2018. After prostate biopsy we found a poorly differentiated acinar adenocarcinoma with focal cribriform growth (Gleason score 5+5). Staging showed no lymph node invasion or distant metastases. After multidisciplinary **Discussion** external beam radiotherapy (EBRT) with ADT for 2 years ensued. A PSA nadir of 0.07ug/l was measured in July 2019, with an ensuing PSA increase despite androgen deprivation therapy (ADT) reaching 1.29ug/l in July 2020. Staging with PSMA-PET revealed no metastases. Loss of expression of the mismatch repair proteins MSH2 and MSH6, indicative of deficient mismatch repair (dMMR) was seen. Microsatellite analysis confirmed a high-grade microsatellite instability (MSI-high). In August 2020, given the non-metastatic, castrationresistant disease state, Darolutamide was initiated. After an initial PSA decrease to 0.25 ug/l in October 2020, the PSA gradually increased. In May 2021 staging revealed local progression with additional infiltration of the rectum and internal obturator muscle with no signs of distant metastases. Based on the molecular pathology (dMMR/MSI-high) a therapy with Pembrolizumab was initiated in June 2021. The patient showed a PSA decline to undetectable levels in February 2022. As of May 2022, there is no evidence of tumour progression.

Discussion

Standard therapy for locally advanced prostate cancer consists of radical surgery +- adjuvant radiotherapy or EBRT with ADT for 2 years. In this patient an early PSA increase was seen, despite concomitant ADT. Darolutamid was initiated based on the **Results** of the ARAMIS trial, as it revealed a 31% lower risk of death in CRPC patients compared to placebo. This only resulted in a brief PSA reduction, so molecular characterization was performed, revealing dMMR/MSI-high status. A subgroup analysis of the ARAMIS trial had revealed that dMMR/MSI-high status was associated with more aggressive subtypes, but also demonstrated a high response to check-point inhibition of PD-1/PD-L1. Therefore, Pembrolizumab was initiated. The treatment was tolerated well without tumour progression, highlighting the importance of molecular characterization in patients with advanced prostate cancer.

Conclusion

In patients with advanced prostate cancer and dMMR/MSI-high tumours, checkpoint inhibition provides a treatment option which is often well tolerated and offers the potential for long-term tumour control.

P103
Fallbericht Groteskes Urethraldivertikel

H Pütz; GB Ineichen1; G Thalmann1
1 Inselspital - Universitätsspital Bern

Hintergrund
Ein 81-jähriger Patient mit St.n. Radiotherapie der Prostata 2004, Harnröhrenrekonstruktion mit Vorhautplastik 2012, Prostatektomie 2015 und Urethrotomia interna 2016 wurde uns zugewiesen. Beim Patienten besteht eine totale Inkontinenz mit Urinalkondomversorgung. Vorstellungsgrund ist eine schmerzhafte skrotale Schwellung v.a. morgens im Liegen. Nach dem Aufstehen kommt es zur Regredienz der Schwellung mit Urinabgang in das Urinalkondom. Es besteht eine Dysurie bei zuletzt behandeltem aber nicht vollständig kurierten HWI.

Abklärungen
Klinisch zeigt sich ein vergrössertes Skrotum ohne Infektzeichen. Bei Druck auf das Skrotum kommt es zur Urinabgang ab urethram. In der retrograden Darstellung lässt sich ein Kontrastmittelaustritt in eine glattberandete Raumforderung nach skrotal darstellen.
Zystoskopisch lässt sich diese Kollektion am Übergang zum Harnröhrenbulbus im Sinne einer Aussackung der Harnröhre darstellen.
MR-graphisch betätigte sich eine ventrale Diastase des Corpus spongiosum und der Urethra ab dem Übergang Pars membranacea/spongiosa mit Aufweitung und Aussackung der Urethra in das Skrotum dorsal der Hoden mit einer Flüssigkeitskollektion von 79x73x73mm.

Diskussion
Ursprünglich für das Divertikel ist a.e. die Vorhautlappenplastik, da diese ebendort lokalisiert ist und sich wahrscheinlich über die Jahre ausgedehnt hat. Der Befund hat die Tendenz sich zu erweitern, ist ein Keimreservoir und die Lebensqualität ist kompromittiert. Die Empfehlung ist das Divertikel offen zu resezieren.
Ein Operationstermin ist vereinbart, der postoperative Verlauf wird zum Kongresszeitpunkt bekannt sein.
Die Literatur zu erworbenen Harnröhrendivertikeln beim Mann ist begrenzt und besteht überwiegend aus Einzelfallstudien. In einem vergleichbaren Fall eines Urethraldivertikels nach Prostatektomie, Sphincterprothesenim- und Explantation wurde eine Exzision des Divertikels und eine End-zu-End Anastomose der Harnröhre erfolgreich durchgeführt [1].
Eine retrospektive Studie analysierte die Daten von 22 Männer mit Harnröhrendivertikeln. Insgesamt hatten 19 dieser Patienten urologische Voreingriffe. Von diesen 19 hatten wiederrum 5 wie unser Patient eine Harnröhrenplastik. Behandlungsoptionen waren nicht-operativ bei 7/22, die Divertikelresektion bei 12/22 und bei 3/22 die Harnableitung mittels Ileum-Conduit. Nach medianem follow-up von 2.3 Jahren war die Rate der rezidivfreien Patienten bei 91%. Die Therapie richtete sich nach der Schwere der Symptomatik [2].

P104

Case report : un coup (de soleil) dans la vessie.

C Dumont; S Chilou; A Reis; K Kellou
Groupement Hospitalier de l'Ouest Lémanique (GHOL)

La maladie métastatique de la vessie est inhabituelle, avec seulement 2 % des cas de cancer de la vessie représentant des métastases. La survenue d'un mélanome métastatique de la vessie est plus fréquente que le mélanome primitif de la vessie. Le diagnostic anatomopathologique est difficile et une bonne anamnèse et récolte des antécédents est primordiale.
Une femme de 67 ans avec antécédents de chirurgie orthopédique du pied droit ainsi qu'un mélanome de l'épaule gauche réséqué en 2016 (reprise de cicatrice et ganglion sentinelle axillaire gauche, négatif), stade Breslow pT2a cN0 cM0, 1.48 cm, non suivi depuis.
La patiente se plaint de douleurs épigastriques depuis 4 mois, fluctuantes, non liées aux repas, intenses, associées à des vertiges sans autre symptôme. Une imagerie a été réalisée par CT-Scan mettant en évidence de multiples nodules pulmonaires, des adénopathies médiastino-hilaires et latéro-aortiques, 2 lésions vésicales, ainsi qu'une lésion lytique du corps vertébral de L3, latéralisée à gauche avec érosion de la corticale latérale. Le diagnostic le plus probable est d'une tumeur de vessie multi-métastatique et la patiente bénéficie d'une TURV le 07.12.2022.
La cystoscopie met en évidence un urètre sans particularité et dans la vessie une seule lésion pédiculée en paroi latérale gauche, peu vascularisée, gélatineuse qui est reséquée en monobloc.
La pathologie montre une infiltration de la paroi vésicale par un mélanome à cellules épithélioïdes, sans évidence d'envahissement du détrusor. Au niveau immunohistochimique les cellules expressent le Melan A et la vimentine, mais n'expressent pas le HMB45. L'expression PD-L1 est inférieure é 0,2%.
En effet, en ce que concerne l'immunohistochimie la vimentine présente une sensitivité de 96%, et quand négative, peut exclure un mélanome, le HMB45 présente une sensibilité de 77–100% dans les mélanomes primaires et seulement 56–83% dans les lésions métastatiques.
Dans les cas de mélanome vésical métastatique, des antécédents cliniques de mélanome primaire peuvent exister, bien que certains primaires régressent spontanément, ce qui peut être difficile à établir de manière concluante. Cependant dans ce cas précis, l'expression négative au HMB45 et les antécédents de mélanome suggèrent très fortement qu'il s'agit d'une métastase vésicale.
La patiente a été traite par double immunothérapie de première ligne par ipilimumab et nivolumab, ainsi que de la radiothérapie palliative osseuse et cérébrale.

P105

Case report : une colique néphrétique simple, mais compliquée…

S Chilou; C Dumont; C Nicolle Chilou; A Reis; K Kellou
Groupement Hospitalier de l'Ouest Lémanique (GHOL)

L'ectopie rénale fusionnée croisée est une anomalie congénitale rare, ou les deux reins se retrouvent du même côté de la colonne vertébrale et sont fusionnés. Cette anomalie a une incidence estimée à 1 : 2000, avec une prédominance chez les hommes. En temps normal, chaque rein a son propre système collecteur complet.
Nous présentons ici un cas très rare d'un homme de 53 ans consultant pour une colique néphrétique simple sans critère de gravité, chez qui nous avons découvert une ectopie rénale fusionnée croisée avec deux systèmes excréteurs hauts drainés par un seul uretère implanté au niveau vésical contro-latérale, ce qui peut changer la prise en charge de sa maladie lithiasique.
Un homme de 53 ans en bonne santé habituelle consulte aux urgences en raison de douleur lombaire gauche. Le patient est connu pour avoir déjà fait une colique néphrétique en 2018. Actuellement il ne présente pas de fièvre, et l'examen clinique retrouve une douleur à la percussion de la loge rénale gauche irradiant en fosse iliaque droite. Le laboratoire effectué ne retrouve pas de syndrome inflammatoire biologique ni d'insuffisance rénale, et le SU ne met pas en évidence de signe d'infection.
Le scanner des urgences montre une malformation congénitale avec un rein droit ectopique croisé et fusionné avec le rein gauche, avec un calcul de 3 mm au niveau de l'uretère moyen gauche, associé à un bassinet extra sinusal à 2,4 cm.
Le patient est mis au bénéfice d'un traitement conservateur, et nous le voyons 48h plus tard pour un contrôle au vu de son anatomie particulière. Il a pu expulser spontanément le calcul, dont l'analyse spectrophotométrique montre une composition d'Oxalate de Calcium (40 % mono et 60% dihydraté).
Nous complétons le bilan par un uro-CT avec phase tardive à fin de mieux investiguer la malformation. Ce CT montre un système excréteur gauche (supérieur) qui donne un uretère fin qui rejoint la jonction pyélocalicielle du système excréteur droit (inférieur) qui se poursuit par un uretère unique. Cet uretère unique croise la ligne médiane avec un abouchement urétéro-vésical à droite.
En raison de cet uretère fusionné, le patient est donc à considérer comme un rein unique en cas de colique néphrétique.
Il a été renseigné concernant sa malformation congénitale et a été adressé en consultation de néphrologie pour un bilan métabolique afin d'éviter la récidive de calcul. La surveillance se fera annuellement par imagerie afin de diagnostiquer toute récidive de calcul.

P106
Case report: A ketamine-induced cystitis story

S Schaer; B Roth; N Grilo
CHUV Centre Hospitalier Universitaire Vaudois (CHUV)

Background: Ketamine is a general anesthetic. Due to its rapid onset and short duration of action, it is widely abused as a recreational drug. Chronic ketamine abuse can lead to significant complications in the urinary system, specifically ketamine-induced cystitis (KIC). The clinical presentation of KIC can vary and may mimic interstitial cystitis, including symptoms such as increased voiding frequency, urgency, hematuria and urinary pain. The entire urinary tract can be affected, resulting in hydronephrosis due to ureteral involvement and/or bladder fibrosis. Cystoscopic examinations and bladder biopsies frequently reveal urothelial denudation, inflammatory changes, and infiltration of inflammatory cells. The initial step in treatment involves discontinuing ketamine use. Patients in the early stages of KIC can benefit from anti-inflammatory drugs, analgesics, anticholinergics, intravesical instillation of hyaluronic acid, hydrodistension, and intravesical injection of botulinum toxin-A. For patients with advanced disease, surgical interventions such as partial or radical cystectomy with urinary diversion are often necessary. We present a case of a young woman suffering from severe KIC.

Case presentation: A 31-year-old ketamine addicted woman, known for two previous cesarean sections with the most recent one in 2022, presented with increased voiding frequency and pelvic-perineal pain. Due to a lack of response to conservative treatment, laparoscopy with adhesiolysis between the bladder and uterus was performed by patient's gynecologist, but there was no improvement regarding her symptoms. Subsequently, a cystoscopy revealed significant inflammation of the bladder with reduced bladder capacity. An abdominal CT scan showed bladder wall thickening, bilateral hydronephrosis, and distal ureteral thickening. Cystography revealed bilateral renal vesico-reflux. Hydrodistension with injection of 80 U of Botox was performed. Although there was initial improvement, the patient was referred to our center for further evaluation and treatment due to persistent severe pain and psychological distress. After a psychological examination, a radical cystectomy with ileal diversion was performed.

Conclusion: The clinical presentation of KIC can vary depending on the severity of the disease. The diagnosis relies on the patient's medical history and should be considered in the differential diagnosis of young patients presenting with pain and symptoms related to urinary storage

P107

Case Report - Renal artery pseudoaneurysm and central pulmonary embolism after minimal-invasive partial nephrectomy for renal cell carcinoma - a challenging management

M Schaub1; N Fleury2; B Egger1
1 HFR - hôpital fribourgeois; 2 Hopital Daler Fribourg

Background:
Renal artery Pseudoaneurysma (RAP) appears in less than 2%1 of minimal-invasive partial nephrectomies (MIPN) but with the emergence of the minimal-invasive approach and nephron-sparing surgery2, its global incidence increased. Delayed diagnosis of RAP may be fatal, therefore, it should be a differential diagnosis in cases with postoperative bleeding. Angioembolization is the effective standard management of RAP3. Treatment of acute central pulmonary embolism (ACPE), a potential complication after all interventions may be challenging in RAP patients4-5.

Aims:
We describe the management of a patient presenting a RAP followed by ACPE after repeated MIPN for a recurrent clear cell renal cell carcinoma (ccRCC).

Material&Methods:
A 44-old man, with the history of a laparoscopic pararenal nodule excision and a MIPN on the right kidney for a ccRCC 2 weeks and 5 months ago, respectively, presents with acute abdominal pain. Radiological assessment reveals a right renal hematoma and a diffuse hemoperitoneum without signs of active bleeding. A conservative treatment with monitoring was initiated. 4 days after, he was dismissed home. 2 weeks later, he develops again acute abdominal pain. Angio-CT-scan demonstrates now the right RAP (figure 1) with an increasing hemoperitoneum.

Results:
The RAP was closed by emergency coil embolization. (Figure 2-4). The day after the patient complicates with peripheral ACPE. Due to the high risk of re-bleeding full systemic anticoagulation was not possible and therefore an IVCF placed (Figure 5) and only a prophylactic anticoagulation initiated. Therapeutic anticoagulation was started 3 days later with surveillance on the ICU. After an uneventful follow-up he could leave the hospital a week later.

Conclusions:
RAP is a rare but potentially fatal complication of MIPN and may be treated by angioembolization. Surgeon should be aware of this complication, especially in patients with apparent postoperative bleeding. Associated with ACPE, a multidisciplinary management and intensive monitoring is mandatory.

P108

Case report: unclear penis lesion leads to partial penectomy

Y Scherrer1; D Eberli2
1 GZO Wetzikon; 2 USZ UniversitätsSpital Zürich

A 59-year-old male presented at our institution after initial workup in an outpatient urological clinic with unclear painless induration at glans penis since several months, which worsened to a painful and pus excreting lesion. Patients sexual (virgin), surrounding (no animal contact, office work) and travel history did not show any high risk situations. B symptoms like fever and night sweat were negated by the patient, while a willingly weight loss of 5 kilograms over the last year was documented. An initial punch biopsy, microbiological workup (Chlamydia tr., Neisseria g., M. hominis, U. urealyticum, HIV, TPHA) and magnetic resonance imaging (MRI) of pelvic and penis performed at the outpatient clinic after inefficient antibiotic therapy did not show any noticeable findings.
At time of presentation in our institution (USZ), the patient was free of voiding problems and confirmed no sexual interactions in his lifetime. The patient was free of any regular medication, non smoker and non specific alcohol consumption. A physical examination revealed a painful and indurated distal third of the penis at transition to glans penis with pus secretion at sulcus coronarius with no palpable lymph nodes inguinal. We did repeat a fully work-up for sexual transmitted diseases (STD) which was without pathological findings.
After execution of another, deep tissue biopsy and CT chest, a presentation at our interdisciplinary board followed. Thus, all examinations were without specific findings or with an explanation of the unclear lesion at glans penis.
After exclusion of M. tuberculosis infection, granulomatosis with polyangiitis was seen unlikely because of negative ANCA, no signs of vasculitis and no hilar lymphadenopathy in CT chest by rheumatological doctors. Therefore sarcoidosis with genital affection due to histological and labor analytical findings (slightly elevated soluble IL2 receptor and neopterin) was considered as possible differential diagnosis.
Furthermore labor analysis showed an unclear anemia and elevated liver values, which is under investigation.
After shared decision making with the patient, suffering from an ongoing, painful process at follow up control, we decided to perform a partial penectomy.
At time of discharge the patient showed vital and dry wound situation with placed transurethral catheter.

P109

Ectopie rénale gauche croisée et diverticule distal de l'uretère pelvien gauche : A propos d'un cas

A Scherz-Moussa Youma1; F Vaccaro2; D Nguyen1
1 rHNE; 2 HUG Genève

Introduction : L'ectopie rénale croisée est une anomalie congénitale très rare. Elle est décrite pour la 1ère fois par Wilmer en 1938. L'incidence de l'ectopie est de 2 à 10 pour 10000 personnes dépendant du mode de détection. Elle désigne une transposition des 2 reins sur un même côté de la ligne médiane. Les 2 reins peuvent être fusionnés ou non donnant l'aspect de reins superposés. Nous rapportons un cas d'ectopie rénale croisée sans fusion des extrémités de découverte fortuite lors d'une investigation pour une hématurie et nous effectuons une revue de la littérature. Présentation du cas : Patient de 59 ans, envoyé par le médecin traitant pour une évaluation urologique dans le contexte d'une hématurie microscopique ainsi qu'une leucocyturie. La cystoscopie et la cytologie urinaire sont sans particularité. L'ultrason révèle l'absence de rein à gauche. Dans ce contexte, le bilan est complété par un scanner des voies urinaires. Celui-ci ne montre pas d'obstacle ou de lésions des voies urinaires. On détecte néanmoins une malformation congénitale sous forme d'une ectopie rénale gauche croisée associée à un diverticule distal de l'uretère pelvien gauche. Le système pyélocalicielle n'est pas dilaté. Notre conduite fut de rassurer le patient.

Discussion : L'ectopie rénale croisée est une anomalie du développement embryonnaire du bourgeon urétéral et du blastème métanephrique entre la quatrième et la huitième semaine de gestation. Elle peut être de trois types : Ectopie croisée avec fusion, ectopie croisée sans fusion et ectopie croisée bilatérale. L'ectopie rénale croisée avec fusion est le type le plus fréquent, constituant 90% des cas et avec une incidence à l'autopsie de 1 sur 7500. La plupart des cas d'ectopie rénale croisée est de découverte fortuite et généralement asymptomatique. A la cystoscopie les méats urétéraux sont ectopiques dans 3% des cas. Des anomalies comme le reflux vésico-urétéral, l'urétérocèle, la lithiase rénale, et une obstruction de la jonction urétéro-vésicale et très rarement un cancer peuvent être associés. Dans notre cas un diverticule de l'uretère distal était présent. L'ectopie rénale croisée ne nécessite généralement pas de traitement.

Conclusion : L'imagerie médicale a permis la découverte fortuite d'un rare cas d'ectopie rénale croisée gauche sans symptôme spécifique. La nécessité de la surveillance régulière n'est pas encore démontrée, d'où le besoin d'inclure un large nombre de cas avec un suivi à long terme.

P110

Case report: A case of post-renal kidney failure following Urolift

E Payebto Zoua
CHUV Centre Hospitalier Universitaire Vaudois (CHUV)

Introduction

Prostatic urethral lift (Urolift) was introduced in 2004 as a treatment for LUTS due to prostatic hypertrophy.It has the advantage of minimizing the risk of retrograde ejaculation.It should be reserved for men with no median lobe and a prostate volume smaller or equal to 70 ml.However,short term failures rates are not negligible and retreatment can be necessary: in a retrospective multicenter study 7 % of patients remained with a catheter at 30 days [1]; surgical retreatment rates reported by Roehrborn and al. [2] were 5 % and 14% after one and five years respectively.

Case report

We report the case of a fit 62-year-old man with LUTS and Urolift failure.Despite treatment with an alpha-blocker,IPSS score was 15/35 and QoL score was 6/6.Prostatic volume was estimated to be 30 ml.Maximum urine flow rate was 10 ml/sec and post-void residual was 50 to 100 ml.Cystoscopy prior to the intervention described a 2 cm prostatic urethra with a bilobar configuration.Patients' priority was the preservation of sexual functions,so Urolift was offered.The procedure was performed with two implants and a satisfactory result was achieved with no complication noted.Evaluation at 2 months showed increased quality of life.However maximum urinary flow and post-void residual remained stable and even worsened subsequently.Thirteen months after the procedure, patient had a urodynamic study which showed a persistent obstruction (bladder outlet index of 55 cmH20),with normal (Pdet = 70 cmH20 at peak flow) detrusor contraction and normal bladder compliance (260 ml/cmH20).Post void residual was 320 ml and the cystography showed active and passive grade IV vesicoureteral reflux on the left.The ultrasound showed a de novo grade 3 left hydronephrosis.Relative left kidney function was decreased to 13 % on MAG-3 scintigraphy.The patient never presented any abdominal or flank pain.A TURP with resection of the median and lateral lobes was offered to the patient.He underwent the procedure on April 2023 with no complications.

Discussion

This case illustrates a failure of urethral lift with persisting bladder outlet obstruction.In addition, our patient presented with grade 4 vesicoureteral reflux in the left kidney and rapid loss of left kidney function.Our case suggests that urodynamic testing should be considered promptly in patients with no Objective improvement after Urolift procedure.A persistent and worsening obstruction might lead to upper urinary tract complications.

P111

Infectious aortic aneurysm with Mycobacterium bovis after intravesical Bacille Calmette–Guérin therapy

M Thüring1; M Giardini2; P Stalder2; T Wyss2; D Steffens3; C Padevit1; Y Trachsel1; H John1
1 Klinik für Urologie Kantonsspital Winterthur; 2 Klinik für Gefässchirurgie Kantonsspital Winterhur; 3 Klinik für Infektiologie Kantonsspital Winterthur

Bacillus Calmette-Guérin (BCG) is an attenuated form of mycobacterium bovis. Its intravesical instillation is a pillar in treatment of non-muscle invasive bladder cancer (NMIBC) and carcinoma in situ (CIS). Common adverse reactions are local irritation, fever and malaise. (1) Hematogenous spread and infections occur in less than 5 % of patients. (2) Vascular complications are rare but consist mostly of infectious native aortic aneurysms (INAA) which show high mortality. Only around 60 BCG-associated cases were reported since 1988. (3,4)

Case presentation
A 56-year-old patient was diagnosed with NMIBC pT1, high grade and CIS after transurethral resection of the bladder (TUR-B) and second TUR-B. The patient completed BCG induction and 4 maintenance cycles. BCG-instillations were tolerated well, the only adverse reactions were local irritaion. Computed tomography (CT) detected a suspicious lesion adherent to the infrarenal aorta suspicious for aortic aneurysm. 18F-Fluorodeoxyglucose Positron-Emission-Tomography (18F-FDG PET-CT) measured an increased uptake. The patient showed no symptoms, no elevated inflammatory markers in blood samples and no bacterial growth in blood cultures.
Vascular surgeons offered laparotomy which showed caseous necrosis and a pseudoaneurysm. The affected part of the infrarenal aorta was resected and a bovine pericardial patch repair was performed. Polymerase chain reaction (PCR) of the necrotic tissue identified Mycobacterium tuberculosis complex and we initiated a tuberculostatic therapy with Isoniazid, Rifampicin and Ethambutol. The patient was discharged 6 days after operation. Tuberculostatic therapy is planned for 12 month, radiological follow up with PET-CT after 6 months.

Discussion
Our case showed a rare but typical presentation of hematogenous spread of mycobacterium bovis because of intravesical BCG-therapy. B-symptoms and malaise in combination with normal clinical examination can draw suspicion to a chronic disease like disseminated BCG- infection if the patient has a history of NMIBC and has undergone BCG-treatment. Because of the slow replication rate of mycobacterium bovis symptoms can occur months or years after finishing BCG-treatment. (5)

Conclusion
INAA with mycobacterium bovis are a rare but dangerous complication of intravesical BCG-therapy. Diagnosis can be hard because of nonspecific symptoms and imaging. Treatment consists of triple antimycobacterial therapy and radical surgery.

P112

Le cystadénome séreux testiculaire associé à un volumineux kyste épididymaire, cause rare d'hypertrophie scrotale, à propos d'un cas.

A Rybarikova; F Crettenand; J Dagher; A Favre-Bulle
CHUV

Introduction

Les cystadénomes séreux testiculaires sont des tumeurs intratesticulaires rares et bénignes, caractérisées par la présence de cellules séreuses qui peuvent produire une quantité importante de liquide. Le spectre clinique varie de l'absence totale de symptôme jusqu'aux douleurs testiculaire nécessitant une prise en charge chirurgicale.

Cas

Nous décrivons ici le cas d'un homme de 60 ans, présentant une imposante masse scrotale gauche indolore, d'apparition spontanée et de croissance progressive depuis 4 ans. Hormis la gêne esthétique, il ne mentionne aucun symptôme urologique.
A l'examen clinique, on retrouve un volumineux scrotum gauche, indolore à la palpation, sans tuméfaction locale. Le reste de l'examen clinique est sans particularité. L'AFP, les b-HCG et la LDH sont dans les limites de la norme. L'échographie testiculaire met évidence une structure homogène avec des caractéristiques échographiques évoquant un testicule homogène mais d'un volume estimé 700ml. Le reste de l'examen est sans particularité. Un scanner thoraco- abdominal ne montre pas de lésion suspecte à distance.
L'indication opératoire à une orchidectomie gauche par voie inguinale est retenue. L'analyse anatomopathologique identifie un kyste paratesticulaire nécrotique avec des remaniements inflammatoires et fibreux chroniques, de 11.5 cm de grand axe, semblant prendre origine entre l'épididyme et la vaginale, ainsi qu'un cystadénome séreux intratesticulaire mesurant 1 cm de diamètre. Le testicule gauche mesure 4.2 x 4 x 1.5 cm. Les suites opératoires sont simples avec une évolution favorable.

Discussion

Les kystes paratesticulaires sont souvent asymptomatiques et découverts fortuitement, tout comme les tumeurs testiculaires bénignes. Le cas de ce patient est exceptionnel par la taille de ses lésions. Le diagnostic est généralement confirmé par l'imagerie. Toutefois, en fonction de la taille des lésions et selon la volonté du patient, une exérèse chirurgicale peut être discutée d'emblée. La nature bénigne de la lésion ne pouvant être confirmée avec certitude qu'à l'examen anatomopathologique, un abord chirurgical par voie inguinale est à privilégier.

P113

Rare Complication after Victo R Sphincter Implantation- A case report

J Sonderer1; A Tiemeyer2; A Gabuev2; TR Herrmann2
1 KSSG Kantonsspital St. Gallen; 2 Spital Thurgau AG, Kantonsspital Münsterlingen

Background

In average about 15 to 20% of patients experience stress incontinence after radical prostatectomy1. Implantation of artificial urethral sphincters (AUS) are well established, the continence rate varies between 50 -80%2,3, revision rate within 5 years postoperatively is roughly 28%, 1-3 % experience implant infection, 5% urethral erosion.
Here we present a rare complication after Victo R Sphincter Implantation

Case Report

A 75-year-old patient was admitted to our institution with initially symptoms of a urinary tract infection and II° stress incontinence.
In the past the patient underwent a radical prostatectomy (08/2016) due to an adenocarcinoma of the prostate (pT3a, pN0, M0, L0, V0, Pn1, R0). Initial postoperative course in 2016 was unremarkable yet the patient developed a bladder-neck stricture, consecutively bladder neck incision was performed almost a year later (07/2017)
Afterwards the patient showed II° stress incontinence. Hence a Victo R Sphincter was placed (11/ 2017), resulting eventually in good pad free continence for almost 3 _ years. Past medical history was relevant for Morbus Parkinson and neuropathy of unknown aetiology. Up to this point all interventions were performed by a nearby urologist
In summer 2021 the patient developed recurrent UTI and II° stress incontinence. Several antibiotic treatments administered by his office urologist were unsuccessful
He was then admitted to our hospital. On the second day of admission the patient suddenly developed abdominal pain and recurrent episodes of vomiting. A CT scan was performed and free intraabdominal liquid as well as a caliber jump of small intestine in the right lower abdomen and «whirlpool»-sign was detected. The patient underwent surgery the same day. Preoperatively a cystoscopy was performed, showing no urethral erosion and a nelaton catheter was placed after deactivation of the sphincter. Intraoperatively small intestine was wound around the balloon and feeding cable of the Victo R Sphincter: Orthotop placement of the bowel was reestablished and the sphincter balloon relocated to pre-peritoneal space.
Postoperative course was unremarkable. The patient was discharged 4 days postoperatively with a correct placed transurethral catheter.

Conclusion

AUS are safe and have good functional outcomes yet rare complications can occur even in later follow up

P114

Verwendung eines Urinalkondoms zur Druck-Fluss Messung bei Männern in Rückenlage und im Sitzen

K Böhler; H John; J Tornic
Kantonsspital Winterthur

Hintergrund und Ziele

Druck-Fluss-Untersuchungen sind ein wesentlicher Bestandteil der urodynamischen Untersuchung zur Beurteilung der Blasenentleerung. Sie bestehen aus einer Uroflowmetrie zur Messung des Urinflusses sowie der kontinuierlichen simultanen Messung des korrespondierenden intravesikalen Blasendrucks bei der Harnblasenentleerung. Nach Good Urodynamic Practice sollte die Untersuchung in sitzender oder stehender Position durchgeführt werden. Unter bestimmten Umständen (z. B. bei neurologischen Erkrankungen) lässt sich die gesamte urodynamische Untersuchung nur im Liegen durchführen, so dass das Vorliegen einer infravsikalen Obstruktion nicht beurteilt werden kann.
Dieser Umstand hat uns veranlasst nach einer Lösung für die Messung einer Druck-Fluss-Studien in Rückenlage zu suchen. Aufgrund der Relevanz prostatogener Störfaktoren auf die Entleerung sowie der anatomischen Begebenheiten haben wir die **Method**en nur bei Männern untersucht.

Material und Methoden

In diese laufende Studie werden männliche Patienten (< 18 und > 95 Jahren) aufgenommen, bei denen eine urodynamische Untersuchung erforderlich ist. Die Untersuchungen werden gemäss den Standards der ICS durchgeführt: 1. in sitzender Position mit einer normalen freien Uroflowmetrie, 2. in sitzender Position mit einem Urinalkondom und Drainageschlauch (Länge 50 cm, Durchmesser 0,7 cm) um den Urin in den Flowmeter abzuleiten, 3. in Rückenlage mit einem Urinalkondom und Drainageschlauch um den Urin abzuleiten.

Resultate

Bisher wurden drei Patienten eingeschlossen. Die maximale zystometrische Kapazität betrug durchschnittlich 590 ml, 180 ml bzw. 206 ml beim den drei Patienten. Spontane Entleerung war bei allen Messungen möglich, mit einer Entleerungseffizienz (entleertes Volumen: maximale zystometrische Kapazität) von 22, 62 und 82 % , 48, 39 und 58 % und beim dritten Patienten 88, 85, 100 %.
Die maximale Flussrate (Qmax) und der Detrusordruck (PDet) bei Qmax waren beim ersten Patienten (5, 12, 22 mL/s und 53, 46 und 31 cmH2O), beim zweiten (6, 4, 5 mL/s und 72, 64 und 38 cmH2O) und beim dritten (17, 15, 16 mL/s und 57, 61 und 57 cmH2O).

Schlussfolgerungen

Die vorläufigen Ergebnisse unserer Studie deuten darauf hin, dass die Verwendung eines mit einem Drainageschlauch verbundenen Urinalkondoms zur Bewertung der Druck-Fluss-Parameter in Rückenlage verwendet werden kann. Es sind jedoch weitere Daten erforderlich, um endgültige Schlussfolgerungen zu ziehen und diese Methode zu validieren.

P115

Case-Report: Obstruierendes, 4cm grosses Urethrakonkrement mit Verdrängung des Sphinkter externus

T Tucholski; A Bovo; T Möltgen; S Wyler
Kantonsspital Aarau

Hintergrund:
Die Urethrolithiasis ist in Industrieländern zwar eine seltene Diagnose, durch die Zuwanderung sind jedoch immer häufiger Fälle bekannt. Die initiale Symptomatik mit der sich die Patienten präsentieren kann sehr stark variieren, von nur sehr geringen Beschwerden bis hin zum akuten Harnverhalt. Die meisten Fälle von Urethrolithiasis bilden sich auf Boden einer abgegangenen Ureterolithiasis oder Urethradivertikeln. Die Behandlung richtet sich nach Lage, Grösse und Mobilisierbarkeit des Konkrements.

Fallbericht:
Bei bereits erfolgter Diagnosestellung 2016 und fehlendem Behandlungswunsch bei nur geringem Leidensdruck erfolgte die erneute Vorstellung Mitte 2021 bei LUTS-Beschwerden und rezidivierenden Harnwegsinfektionen. Bei dekompensierter Situation wurde die Indikation zur operativen Versorgung mittels perinealem Zugang gestellt. Der intra- und postoperative Verlauf zeigte sich unauffällig, die Nachkontrollen ebenfalls, sodass die Behandlung 9 Monate postoperativ abgeschlossen werden konnte.

Fazit:
Die Urethrolithiasis kann lange Zeit oligosymptomatisch sein, jedoch durch Harnwegsinfektionen und akuten Harnverhalt rasch dekompensieren. Eine operative Versorgung sollte den Patienten daher weiter empfohlen werden. Diese muss bei fehlenden Komplikationen nicht unbedingt zeitkritisch erfolgen, sollte jedoch nicht länger als notwendig hinausgezögert werden, um Komplikationen wie in vorliegendem Fall zu vermeiden. Die Kontinenz und Miktionssituation postoperativ zeigten sich subjektiv und objektiv kompensiert. Der perineale Zugangsweg ist bei vorliegender Lokalisation, Grösse und impaktiertem Stein nach unserer Erfahrung zu empfehlen.

P116

Case Report: Renale Papillenhyperplasie – eine seltene Ätiologie der schmerzlosen Makrohämaturie

T Tucholski; S Cermak; M Thomas; L Brunaiova; M Kwiatkowski; S Wyler
Kantonsspital Aarau

Hintergrund:
Die renale Papillenhyperplasie (RPH) ist eine seltene Ätiologie einer Makrohämaturie. Bei nur einigen verfügbaren Fallberichten in der Literatur wird die RPH als eine benigne Veränderung bzw. Variante der renalen Papillen angesehen. Die Entstehung derselben ist bisher unklar, wobei ein Zusammenhang mit oraler Kontrazeption oder NSAR-Einnahme diskutiert wird. Die Guidelines geben keine Empfehlungen zur Behandlung oder Nachkontrolle der RPH.

Casereport:
Wir berichten über den Fall einer 38 jährigen Patientin, welche sich mit einem Erstereignis einer schmerzlosen Makrohämaturie bei uns vorstellte. Nach Ausschluss einer Harnwegsinfektion zeigte eine Zystoskopie blutigen Efflux aus dem rechten Ostium. Eine Malignität der Blase und des oberen Harntraktes konnte zystoskopisch, zytologisch und CT-graphisch nicht nachgewiesen werden. Eine diagnostische Ureterorenoskopie zeigte eine RPH ohne makroskopische oder bioptische Hinweise auf eine Malignität. MR-tomographisch konnten weitere Pathologien (z.B. AV-Fisteln) ausgeschlossen werden, die RPH war auch in der Urographie bds. zu erkennen. Somit konnte die Ausschlussdiagnose einer RPH gestellt werden. Im Verlauf entwickelte die Patientin nur unter körperlicher Anstrengung weitere, selbstlimitierende Makrohämaturien. Derzeit besteht keine Indikation zur aktiven Therapie.

Diskussion und Fazit:
Von zentraler Bedeutung ist der Ausschluss anderer Ätiologien der Makrohämaturie, wie z.B. des Urothelkarzinoms. Nach Diagnosenstellung der RPH gilt es der Festlegung einer Therapie und eines adäquaten Nachsorgeschemas. Hier geben die aktuellen Guidelines keine Empfehlungen ab. In der Literatur ist aus früheren Jahren die (Teil-)Nephrektomie dokumentiert, in jüngeren Jahren die Laser-Ablation der Befunde. Auf Grund des milden klinischen Verlaufs und des geringen Leidensdrucks der Patientin entschieden wir uns gegen eine aktive Therapie. Hinsichtlich der Nachkontrollen sind die Konzepte in der Literatur ebenfalls kontrovers. Einige Autoren empfehlen eine engmaschige Nachkontrolle, andere kontrollieren die Befunde weniger streng nach. In Anbetracht der benignen Ätiologie empfahlen wir der Patientin eine MR-Urographie nach 12 Monaten zur Verlaufskontrolle und zudem eine Zystoskopie mit 45 Jahren, da bei Auftreten einer erneuten Makrohämaturie das Urothelkarzinom leicht übersehen werden kann. Aktuell ist die Patientin beschwerdefrei.

P117

Fallbericht einer urethro-perineo-skrotalen Fistel aufgrund Migration eines urethralen Fremdkörpers

D Wicki1; S Meierhans Ruf2; M Kwiatkowski1; S Wyler3
1 Kantonsspital Aarau ; 2 Kantonsspital Aarau; 3 Kanontsspital Aarau

Hintergrund
Urethrale, nicht iatrogene Fremdkörper sind selten und haben oft eine zugrundeliegende psychiatrische Problematik. Das Entfernen eines über Jahrzehnte persistierenden urethralen Fremdkörpers mit Migration nach perineoskrotal ist eine Rarität, es bestehen hier keine etablierten Operationstechniken.

Fallvorstellung
Ein 62-jähriger Patient wurde im septischen Schock bei ausgedehntem retroperitonealem Abszess aufgrund Duodenalperforation notfallmässig zugewiesen. Computertomographisch zeigten sich 12 Glasthermometer im GI-Trakt und ein urethro-perineo-skrotal liegendes Thermometer. Die abdominalen Fremdkörper wurden unversehrt mittels Laparotomie evakuiert. In der gleichen Narkose wurde der urethrale Fremdkörper entfernt. Dies erfolgte mittels digital-rektaler Mobilisation, wobei das ca. 12 cm lange Stabthermometer über eine scharfe Inzision skrotal entfernt wurde. Urethroskopisch zeigten sich mehrere Fistelgänge. Neben einer suprapubischen Zystostomie zur Harnableitung wurde ein transurethraler Dauerkatheter zur Schienung der Harnröhre eingelegt. Während dem viszeralchirurgisch komplizierten Verlauf war die Abheilung perineoskrotal komplikationslos. Urethrozystoskopisch zeigten sich 6 Wochen postoperativ die Fistelgänge abgeheilt, worauf der transurethrale Katheter entfernt wurde mit weiterhin Harnableitung über den Zystostomiekatheter.
Anamnestisch erfolgte die Inkorporation im Rahmen eines Wettbewerbs im jungen Erwachsenenalter. Bis auf einen leicht abgeschwächten Harnstrahl bestanden keine Symptome. Fremdanamnestisch besteht wohl ein nie abgeklärtes kongenitales Kognitionsdefizit. Wir haben die Hypothese, dass die Intelligenzminderung sowie Gutgläubigkeit ausgenutzt wurde und der Patient sich aus Gründen der Gruppenzugehörigkeit auf dieses risikoreiche Verhalten einliess. Die psychiatrischen Abklärungen ergaben keine Hinweise auf eine psychotische oder suizidale Problematik.

Schlussfolgerung
Nach Migration eines urethralen Fremdkörpers über Jahrzehnte war die transurethrale Entfernung hier nicht möglich. Als Alternative wurde ein skrotaler Zugang mit digitaler Mobilisation von rektal gewählt. Dabei musste auf eine schonende Manipulation geachtet werden, um eine Zerstörung des fragilen Thermometers mit drohender Quecksilberintoxikation zu vermeiden. Bezüglich der urethralen Fisteln bot sich ein konservatives Prozedere mit Schienung der Harnröhre und suprapubischer Harnableitung zum anschliessenden Blasentraining an.

P118

Hyperbaric oxygen therapy for acute penile glans ischemia after prostatic artery embolization: a case report

T Zuber
Hopitaux Universitaires de Genève-HUG

Prostatic artery embolization (PAE) is part of the armamentarium for minimally invasive treatment of benign prostatic hyperplasia (BPH) in well-selected patients. Acute penile glans ischemia (PGI) is a rare but severe complication of PAE supposedly provoked by non-target embolization. We report a case of PGI after PAE treated by hyperbaric oxygen therapy (HOT).

A 79-years old patient known for hypertension and dyslipidemia, presenting drug-resistant obstructive lower urinary tract symptoms (LUTS) due to HBP (prostatic volume 110ml) from many years, was admitted to the hospital (Hôpital Riviera-Chablais (HRC) for an acute urinary retention of 1L. An indwelling urinary catheter was placed, and he opted for PAE because he wished for a quick procedure and recovery.
PAE was performed at HRC during two distinct procedures within the same week, due to technical difficulties, starting with the left prostatic artery, then the right. The patient was discharged each time with an indwelling urinary catheter at day 1, without any immediate complication. The first symptoms of PGI appeared 5 days after the second and final embolization procedure. Patient reported an intense penile glans pain, associated with a whitish and purple discoloration. First medical care was provided at HRC with intra-veinous antibiotics and oral tadalafil. He was then transferred to Hôpitaux Universitaires de Genève (HUG), the single public institution providing HOT in western Switzerland. He benefited from a total of 12 HOT sessions associated with topic antiseptic, oral buprenorphine and tadalafil. HOT is thought to be effective by triggering hyperoxygenation of ischemic tissues and inducing neovascularization. Furthermore, HOT has shown to have anti-inflammatory properties and anti-microbial activity on wounds. This combined treatment successfully resolved the PGI symptoms in two weeks. The glans started to become redish again and the pain ceased. To note, PAE did not permit to solve completely the patient's LUTS and he yet requires intermittent self-catheterization for optimal bladder voiding. A complementary endoscopic treatment will be further discussed. However, the patient reports subjective satisfaction regarding his urinary functional outcomes.

Conclusion
PGI is a rare but serious complication of PAE that should be promptly recognized. Patients should be offered HOT in addition to local treatment and be addressed to specialized centers providing providing hyperbaric medicine

P119

Robotic transmesenterial approach for ileal ureter by long-length ureter stricture

C Olivieri; S Sarychev; TR Herrmann
Spital Thurgau AG, Kantonsspital Frauenfeld

Introduction: A ureteral stricture is defined as a narrowing ureter causing a functional obstruction. Iatrogenic injuries and radiation treatment cause about 75% of ureteral strictures. They can lead to severe complications, chronic renal failure, and loss of the renal unit. The long stricture is a challenge to reconstruct. The bowel tissue can be successfully used, although such procedures are complex and associated with a substantial morbidity rate. Robotic assistance has been introduced to reduce the morbidity associated with open surgery.

Materials and Methods: This video shows our surgical technique step by step. The patient was initially placed in the 45° right lateral decubitus and 20° steep Trendelenburg position. Pneumoperitoneum was established with supraumbilical mini-laparotomy (Hassan technique). One 12 mm robotic port is placed subcostal on the left medial clavicular line, and one 8 mm suprapubic. The following two robotic ports are placed in between. One 12 assistance port is placed paraumbilical. The left ureter was mobilized transmesenterially, dissected, and spatulated proximally to the stricture. The bowel is inspected from Treitz's ligament toward the cecum. The ileum is fixed to the bladder about 25 cm backward from the cecum. The ileum is adjusted to the spatulated ureter and dissected using the 60 mm Da Vinci Endo-GIA stapler. The end-to-end anastomosis is achieved using the Stratafix 4-0 barbed suture and peritonealised. The patient is repositioned in the 30° steep Trendelenburg; the port placement is similar to a robotic cystectomy. The bladder is dropped and filled using 300 ml 0.9% NaCl. The ileum is adjusted to the bladder and dissected using the stapler. The side-to-side bowel anastomosis is executed. The anastomosis between the bladder and ileum is performed using the Stratafix suture. The bladder is filled to check the anastomosis. No DJ catheter is used. A Foley was left indwelling at the end of the surgery.

Results: The total surgery time was 240 minutes, no blood loss. Using ERAS protocol, the postoperative period was uneventful, with discharge on the sixth postop day. A Foley was removed after an unremarkable cystography in two weeks in the outpatient clinic. Lab Results and ultrasound remained unchanged at three and nine months of follow-up.

Conclusions: The robotic approach proposes a non-inferior minimal invasive option to open surgery with equal outcomes for such ureter reconstruction and salvaging kidney function.

P120

Proposal for a proficiency-based progression curriculum for surgical education of novice patient-side assistants in robotic surgery

C Würnschimmel1; N Grossmann1; F Aschwanden1; M Wenzel2; A Larcher3; CD Fankhauser1; A Mattei1
1 Luzerner Kantonsspital (LUKS); 2 Goethe University Medical Center Frankfurt; 3 Urological Research Institute of Ospedale San Raffaele

Introduction:
As the demand for robot-assisted surgery is increasing, the development of a standardized, structured, and validated training program is one of the main cornerstones to educate novice robotic surgeons. However, although the performance of the console surgeon is the major contributor to successful robot-assisted surgery, the patient-side assistant's role has been paid little attention. Only some retrospective analyses on the impact of the patient-side assistant on perioperative outcomes are available, and evidence is conflicting due to the heterogeneity of the data and differences in the prerequisites in which the analyses were performed.

Methods:
The performance criteria ("metrics") specified and validated in a PBP curriculum require that trainees achieve an **Objective**ly determined performance criterion based on well-defined criteria. This "proficiency" is determined on the basis of **Objective**ly assessed performance by experts who have mastered the tasks and whom the trainees train. In this way, the performance criterion required for trainees to be considered "proficient" is determined. Within the Young Academic Urologists Robotic Section, the metrics were defined in a Delphi-Consensus meeting.

The core of the curriculum and is offered using pre-recorded sets of video sequences and expert sessions on "Do's" and "Dont's", followed by dry-lab exercises. Once the required metrics have been exercised, the trainee is admitted to the PBP part. Here, based on the exercised PBP metrics, the trainee is finally asked to perform as a patient side surgeon during a robotic procedure at their respective home institution. This surgery is supervised and will be rated according to PBP **Method**ology, therefore proficiency of the patient-side assistant is assessed.

Measured variables:
Theoretical knowledge of the PBP metrics (assessment)
Number of tries to reach proficiency for specific PBP metrics in the dry lab
Number of tries to reach proficiency for specific PBP metrics during assisting a robotic procedure
Distribution of errors and critical errors
Feedback by participants

Content of the video:
This proposed PBP curriculum and its contents will be covered, using features and sequences of robotic prostatectomy cases including "Do's" and "Dont's" that demonstrate PBP metrics of the offered curriculum.

V01

Re-Implantation einer hydraulischen Erektionsprothese in ein Penoid über einen beidseitigen inguinoskrotalen Zugang

F von Stauffenberg1; M Hunziker1; D Eberli1; PJ Daverio2; DC Högger1
1 Universitätsspital Zürich; 2 Daverio-Transsurgery-Group

Hintergrund & **Ziele**
Die geschlechtsangleichende Chirurgie ermöglicht es Transgender-Patienten eine physische Erscheinung anzunehmen, die ihrer Identität entspricht. Ein wesentlicher Bestandteil dieses Verfahrens ist die Implantation einer hydraulischen Erektionsprothese in das Penoid, welches bei der Geschlechtsumwandlung von Frau zu Mann konstruiert wird und somit ein sexuell aktives Leben ermöglicht. In der Literatur werden verschiedene chirurgische Techniken zur Implantation unterschiedlicher Prothesenmodelle beschrieben.
Mit einem Operationsvideo zur Implantation einer hydraulischen Erektionsprothese über einen beidseitigen inguinoskrotalen Zugang können wir die stark begrenzte Sammlung von Operationsvideos zu dieser Thematik um eine bisher nicht dokumentierte Operationstechnik ergänzen.

Material und Methoden
Ein 72-jähriger Patient unterzog sich 1968 einer geschlechtsangleichenden Operation von Frau zu Mann mit Anlage eines Penoids. Bei nicht zufriedenstellendem funktionellen Resultat erfolgte in den 90iger Jahren eine Korrekturoperation durch den renommierten Plastischen Chirurgen Dr. Paul Daverio. Im Jahr 2020 trat eine Penoidprothesenfraktur auf, sodass diese im Jahr 2021 operativ mit einer semirigiden Prothese ersetzt wurde. Anschliessend war bei ante perforans befindlicher Prothese eine Umplatzierung und schliesslich eine Prothesenexplantation nötig. Dem Patientenwunsch entsprechend erfolgte nun die erneute Implantation einer Erektionsprothese. Die Operationstechnik der Re-Implantation einer hydraulischen Erektionsprothese AMS 700 CXR MS Pump IZ durch den Erfinder des Transgender «All in one-OP-Verfahrens» Dr. Daverio in ein Penoid wurde mittels Videodokumentation festgehalten.

Resultate
Intraoperativ und in den postoperativen Kontrollen zeigte sich ein erfreulicher Verlauf mit regelrechter Prothesenfunktion. Der Eingriff und die postoperativen Verhältnisse konnten detailliert foto- und videodokumentiert werden.

Schlussfolgerungen
Wir präsentieren die Videoaufnahme einer bisher nicht dokumentierten Operationstechnik des in der Transgender-Chirurgie international renommierten Chirurgen Dr. Daverio im Rahmen eines komplizierten Revisionseingriffs. Das Operationsvideo stellt einen nachvollziehbaren und reproduzierbaren Einblick in das Feld der Implantation von hydraulischen Erektionsprothesen dar und leistet somit einen wertvollen Beitrag im Bereich der Penoid- und Penis-Prothesen-Chirurgie allgemein.

V02

Complete and minimally invasive work-up in penile cancer patients at risk for inguinal lymph node metastases: from the first visit to cure

N Di Nardo; L Zahiti; CD Fankhauser
Luzerner Kantonsspital

Introduction

Penile cancer is an aggressive disease that carries a significant risk of inguinal lymph node metastases (>=T1G2). While invasive lymph node staging is considered the gold standard for men at increased risk, this approach is associated with postoperative complications such as lymphedema, lymphocele, and skin infections that may necessitate postponement of staged procedures. Furthermore, physician delay or false negative staging can result in inferior outcomes, underscoring the importance of a fast and accurate work-up using less invasive staging and resection techniques to minimize perioperative morbidity. This video outlines our workflow from the initial visit to inguinal lymph node dissection.

Methods

We prioritize the evaluation of penile cancer patients in our outpatient clinic within 7-14 days of referral. During the first visit, a fellowship-trained urologist performs an inguinal ultrasound, and suspicious nodes are immediately sampled using ultrasound-guided fine-needle aspiration (FNA) and/or core needle biopsy by the urologist.
If the ultrasound scan Results are negative, patients are scheduled for an outpatient procedure that includes: 1) a subcutaneous technetium injection at 8 am followed by a biplanar scan, and 2) dynamic sentinel biopsy in the operating theatre after methylene blue subcutaneous injection, followed by penile-sparing surgery both as an outpatient procedure.
If the FNA or dynamic sentinel biopsy Results are positive, patients are scheduled for a radical inguinal lymph node dissection that includes a subcutaneous ICG injection to guide a lymph venous bypass under a microscope, followed by an open or laparoscopic radical inguinal lymph node dissection. After the inguinal lymph node dissection, patients are admitted to the hospital for two days and discharged with a drain that will be removed at an outpatient visit.

Conclusion:

We present a fast, accurate, and minimally invasive lymph node staging approach for men with clinically suspected >=T1G2 penile cancer.

V03

Robotic simple prostatectomy with urethral vesical anastomosis and only suprapubic tube by a massively enlarged obstructing prostate

S Sarychev1; R Rechner1; K Rohrmann1; J Klein2; TR Herrmann1
1 Spital Thurgau AG, Kantonsspital Frauenfeld; 2 Spital Thurgau AG, Kantonsspital Münsterlingen

Introduction: In older men, bladder outlet obstruction and lower urinary tract symptoms for benign prostatic obstruction (BPO) represent common urologic disorders. In the absence of transurethral enucleation of the prostate, open prostatectomy (OP) is still the treatment of choice for men with prostates > 80 mL despite the complications rate of up to 42%, a transfusion rate over 24% and associated permanent stress urinary incontinence (SUI) rate of 10%. Although robotic and laparoscopic procedures can reduce those complication rates, their place in the EAU guidelines for the management of Male LUTS is still uncertain.

Materials and Methods: This video displays our surgical technique step by step. The patient's position is 30° steep Trendelenburg. The port placement is similar to robotic prostatectomy. After dropping the bladder, the periprostatic adipose tissue is removed, and the bladder neck is dissected. The prostate is enucleated anatomically, similar to the endoscopic technique. The hemostasis is achieved using cautery and a Monocryl 4-0 suture. The dorsal vascular complex is secured using a 4-0 V-loc suture. The continuous urethral vesical anastomosis is performed using a 4-0 Stratafix barbed suture. After the closure of the anterior attachment, the bladder is filled to check the anastomosis. The suprapubic tube is placed, and the transurethral catheter is removed at the end of the surgery. No drain is placed.

Results: Total surgery time was 150 minutes, 200 ml EBL. The postoperative period was uneventful. The voiding is started on the second postoperative day. On the next day, after residual urine-free voiding, the suprapubic tube is removed, and the patient is discharged. The 4-week follow-up shows Q max 27 ml/sec, voiding volume 250 ml, IPSS 4/1.

Conclusions: The presented technique causes less urethral trauma with lower postoperative SUI and minimizes postoperative hematuria without requiring postoperative bladder irrigation. Moreover, using only a suprapubic tube allows the voiding to start on the second postoperative day and controls the emptying of the bladder. The continuous watertight anastomosis with the closure of anterior attachments provides rapid healing, which minimizes the possibility of anastomotic insufficiency and reduces the LOS to 3 days with a discharge without any catheter. Robotic simple prostatectomy has many potential advantages and can be an alternative to endoscopic treatment of the extra-large obstructing prostate.

V04
Robotic ureter reimplantation on the neobladder

S Sarychev; R Rechner; L Peter; K Rohrmann; TR Herrmann
Spital Thurgau AG, Kantonsspital Frauenfeld

Introduction:
The gold standard of localized muscle-invasive bladder cancer (LMIBC) is radical cystectomy with urinary diversion (RC with UD)1. Open radical cystectomy (ORC) or minimally invasive approaches like robot-assisted radical cystectomy (RARC) or laparoscopic radical cystectomy (LRC) can be used for surgical treatment of LMIBC1. A benign ureteroenteric stricture (UES) is a known long-term complication of RC with UD, with an incidence rate for robot-assisted radical cystectomy (RARC) ranging from 6,5% to 25.3%3. The overall success rate for endourological management ranges from 26% to 50% vs. 80- 91% for open surgical revision4,5. Robotic assistance has been employed in select individuals to minimize the morbidity associated with open surgery. The robotic approach offers a minimal invasive alternative to conventional open surgery with similar outcomes for the UES reconstruction6.

Materials and Methods: This video demonstrates surgical techniques step by step. The patient is placed in a 30° steep Trendelenburg position; the port placement is similar to a robotic prostatectomy. The pneumoperitoneum is established with supraumbilical mini-laparotomy with the Hassan technique. One 8 mm robotic and two (5, 12 mm) assistance ports are on the right. The following two 8 mm robotic ports are placed on the left. After liberating the neobladder from adhesions, the affected ureter and stricture are localized by intraluminal application of 10 ml (2.5 mg/ml) indocyanine green through a nephrostomy catheter. The ureter is sufficiently mobilized, and the ureteral stricture is identified and dissected. The malignancy of the ureter margin is ruled out using the frozen section. The re-anastomosis is performed using a 4-0 Stratafix suture. After placement of the ureteric stent, anastomosis is achieved.

Results: Total surgery time was 160 minutes without blood loss. The postoperative period was uneventful, with discharge on the second postoperative day. The ureteric stent was removed after four weeks after an unremarkable neocystography. The kidney function parameters and ultrasound were commonplace at the 18-month follow-up.

Conclusions: The robotic approach to UES reconstruction requires appropriate surgical expertise and offers a viable surgical option with excellent outcomes for appropriately selected patients.

V05

Robot-assisted urinary diversion with a modified Indiana pouch and continent appendicocutaneostomy in a paraplegic patient

F Obrecht1; J Pannek2; P Wiklund3; HA John1
1 Kantonsspital Winterthur; 2 Schweizer Paraplegiker-Zentrum; 3 Icahn School of Medicine at Mount Sinai

Objectives
Robot-assisted (RA) urinary diversion is an established surgical approach. This video presents the surgical technique of a RA modified Indiana pouch with a catheterizable appendicocutaneostomy after cystectomy due to neurogenic lower urinary tract dysfunction.

Materials & Methods
The patient was positioned in 25° Trendeleburg position. Trocars of the 4-arm Xi robotic system were placed transperitoneal as in a robot-assisted cystectomy with intracorporal neobladder.
After the organ sparing cystectomy and transposition of the left ureter to the right side, the coecum is mobilized and the appendix identified. Using a SureForm® Stapler 60mm the ileum is stapled 15cm proximal and the ascending colon 15cm distal to the ileoceacal valve. The intestinal continuity is reestablished with a side-to-side ileoascendostomy using the 60mm SureForm ® Stapler. Ureters are connected using a Wallace plate and after insertion of Charrière (Ch.) 8 Mono-J-Catheters the uretero-ileal anastomosis is formed using Stratafix 3-0. The coecum is detubularised along the taenia and a spherical reconstruction is performed using V-Loc 3-0. Then the terminal appendix is opened and the lumen is dilated to Ch. 12. To ensure sufficient drainage an additional Ch. 10 catheter is placed through the abdominal wall into the pouch and it is closed completely. Due to tension the appendix could not be placed into the umbilicus and is placed 5cm distal in the midline and fixed to the skin with PDS 4-0 sutures.

Results
The 64-year-old female patient with an incomplete paraplegia below Th11 since 2017, previously rejected for open surgery due to her body mass index of 36 kg/m2 , was discharged on the 13th postoperative day (pod). No major perioperative complications were observed besides a bothering subcutaneous emphysema. The left and right double-J-stent were removed on the 5th and 6th pod, respectively, with no evidence of obstruction. Autonomous transfer was possible on the 11th pod. First successful catheterization was performed on the 34th pod with a 12 Ch. single use catheter. Full urinary continence was achieved.

Conclusion
RA intracorporeal continent urinary diversion with a modified Indiana pouch and appendicocutaneostomy is a feasible and efficient alternative to open reconstruction. To our knowledge this is the first case report of RA Indiana pouch and continent appendicocutaneostomy. Further experience is required to establish this technique in reconstructive robotic urology.

V06

Robotic assisted radical cystectomy with intracorporeal ileal conduit in a patient with kidney transplant

F Wieland1; M Walter1; J Ebbing1; A Hosseini2; H Seifert1; A Mortezavi1
1 Universitätsspital Basel; 2 Karolinska Institutet

Background: The risk of developing solid cancer in the transplant populations is higher compared with the general population. For muscle invasive bladder cancer, radical cystectomy combined with an ileal conduit is considered the treatment of choice in patients after kidney transplantation. Outcome of RCTs indicate the superiority of a fully minimal invasive approach compared with open surgery. Surgery may be challenging in these patients due to the abnormalities in the urinary tract. Here, we describe the use of a fully robot-assisted approach in a kidney transplant recipient.

Patient/Methods: A 69-year-old female underwent kidney transplantation to the right fossa iliaca at the age of 60 due to primary focal-segmental glomerulosclerosis. Her native kidneys were anuric. She had been diagnosed with muscle invasive bladder cancer (cT3, cN0, M0) 8 years after transplantation. No neoadjuvant chemotherapy was applied. Preoperative eGFR was at 40 ml/min/1.7.

Results: Surgery was performed with the Da Vinci® Xi system (four arms). Intrinsic ureters where clipped. The graft ureter was identified on the right side and subsequently transected. Radical cystectomy was performed. Extended pelvic lymphadenectomy could only be performed on the left side due to the transplant kidney in the right fossa iliaca. The ileal conduit was constructed using 15 cm of ileum (stapler anastomosis) and connecting the transplant-kidney ureter by an end-to-side (Nesbit) anastomosis after placement of an 6F Mono J catheter.
Total operation time was 265 minutes. Total blood loss was 300 ml. There was no need for peri- or postoperative blood transfusions. Hospitalisation time was 11 days. The Mono-J stent could be removed on the 9th postoperative day. Afterwards no ectasia of the transplant kidney was observed. After a temporary decline of the eGFR the kidney function recovered. The histology was pT3b, pN0 (0/21), with negative surgical margins. At the follow up 4 months after surgery the patient presented in a good clinical state with a stable kidney function and no postoperative complications.

Conclusion: RARC with a fully intracorporeal approach is feasible after kidney transplantation with an acceptable operation time. Benefits of the minimal invasive technique can be transferred to this patient population enabling a quick recovery of the transplant function, low complication rate and an early discharge.

V07

Video-Fallbericht: Robotor-assistiertes laparoskopisches Management eines Tumorthrombus in der Vena renalis bei Tumornephrektomie.

AS Nowag1; RT Strebel2; JA Birzele2
1 Urologie Kantonsspital Graubünden; 2 Urologie Kantonsspital Graubünden

Hintergrund & **Ziel**

Das Nierenzellkarzinom kann zu Thromben im venösen System der Niere führen. Das Vorliegen eines Tumorthrombus stellt dabei ein fortgeschrittenes Tumorstadium (T3; bei Erstdiagnose bei ca. 14 % der Nierenzellkarzinome [1]) dar und indiziert in der Regel die radikale Nephrektomie. Eine qualitativ hochwertige präoperative Bildgebung (CT oder MRI) möglichst kurz vor der Operation ist entscheidend für die möglichst exakte Bestimmung der Thrombusausdehnung und somit Operationsplanung. Die Mehrzahl renaler Tumorthromben (65 %) ist dabei auf die Vena renalis begrenzt und wird als Level-0 Thrombus gemäss Mayo Clinic-Staging klassifiziert [2].
Datenlage und Empfehlungen hinsichtlich der operativen Herangehensweise bei renal-venösen Level-0 Tumorthromben sind spärlich. Die manuelle Retromanipulation des Thrombus wird in verschiedenen Lehrbüchern empfohlen [3,4]. Beschreibungen möglicher Techniken dieses Operationsschrittes fehlen jedoch. Aufgrund des zunehmenden Einsatzes der Robotor-assistierten Laparoskopie zur Tumornephrektomie soll ein mögliches laparoskopisches Management der Retromanipulation eines Level 0-Tumorthrombus anhand eines Fallberichts mit Operationsvideo vorgestellt werden.

Fallzusammenfassung

Bei einer 45-jährigen Patientin wird im Rahmen einer Makrohämaturieabklärung CT-graphisch ein 7,5 cm messender Nierentumor an Unterpol rechts diagnostiziert. Bereits bildgebend ergibt sich der Verdacht auf einen möglichen Tumorthrombus in der Vena renalis. Die Tumornephrektomie rechts wird Robotor-assistiert laparoskopisch geplant und durchgeführt.
Der vermutete Tumorthrombus bestätigt sich in der intraoperativen Venensonographie und ist begrenzt auf die Vena renalis. Nach Clippen und Absetzen der Arteria renalis wird der Tumorthrombus durch doppeltes Umfahren der Vene mit einem vessel loop nach lateral Richtung Niere retromanipuliert. Die erneute Venensonographie bestätigt das nun Tumor-freie Absetzungsfenster und die Vena renalis wird mittels Stapler abgesetzt. Die definitive Histologie bestätigt einen tumorfreien Resektionsrand an der Hilusvene von 12 mm.

Schlussfolgerungen

Das Video demonstriert eine einfache, risikoarme Möglichkeit zum Robotor-assistierten laparoskopischen Management eines Level-0 Tumorthrombus in der Vena renalis im Rahmen der Tumornephrektomie mittels Retromanipulation des Thrombus durch einen vessel loop. Die intraoperative Venensonographie bestätigt dabei das Thrombusausmass sowie den Erfolg des Manövers.

V08
specimen morcellation after robotic-assisted laparoscopic total nephrectomy

F Vaccaro1; K Jacques2; J dubuisson3; M Valerio3; D Benamran3
1 Hôpitaux Universitaires de Geneve (HUG); 2 HUG Hôpitaux Universitaires Genève; 3 HUG Hôpitaux Universitaires de Genève

Objective:
Laparoscopic removal of large polycystic or hydronephrotic kidneys can be difficult because of specimen extraction, which may require a significant incision. This can increase post-operative morbidity and length of stay and undermine the benefits of minimally invasive surgery. This video presents a new surgical technique that uses morcellation within an insufflated isolation bag for the removal of large polycystic or hydronephrotic kidneys after laparoscopic robot-assisted total nephrectomy.

Methods:
Total nephrectomy is performed laparoscopically with the da Vinci Robot Xi (Intuitive Surgical, Sunnyvale, CA). Direct visualization morcellation is accomplished with the LiNA Xcise TM morcellator (LiNA Denmark Formervangen 5 Dk-2600 Glostrup, Denmark) and combined with the A.M.I TM Dual Access Bag (A.M.I. Ltd Im Letten 1 6800 Feldkirch, Austria) which enables the specimen to be extracted within an insufflated isolation bag through a trocar port.
After the total nephrectomy is completed, the morcellation bag is introduced in a rolled-up way through the Airseal TM trocar. The specimen is placed into the bag through the large opening of the bag which is then exteriorized through the Airseal TM. The second small opening of the bag is also exteriorized through a Da Vinci trocar.
The trocar is then removed and reinserted into the small opening of the bag, allowing the bag to be insufflated. Optic is inserted into the bag, and the morcellator is inserted through the large opening under direct visualization. The morcellation procedure begins by grasping the specimen, then continues with turmixing it and extracting the specimen from the morcellator under direct vision.

Results:
The Introduction of the insufflated morcellation bag allows the specimen to be securely fragmented with good visibility and no spillage. The bag with the polycystic kidney is finally extracted by the 12mm trocar incision. This allows to avoid a signficant incision during the extraction procedure.

Conclusion:
Morcellation within an insufflated isolation bag is a feasible and safe technique that can preserve the benefits of a minimally invasive laparoscopic approach. The use of the insufflated isolation bag for morcellation neutralizes the risk of spillage in the abdomen and may offer a safe alternative to open nephrectomy.