Benefits of upfront PET-CT use still unclear

Plenary Session 3 evaluates new diagnostics for oligometastatic PCa

By Leek Keizner

"Nobody knows yet if using PET-CT upfront is beneficial, or if picking up small traces of the disease can lead to patient improvement in survival and outcomes. We know from some series that there might be a place for such imaging techniques, but certainly not for all patients. It can be a waste of money and time," Prof. Alberto Briganti (IT) cautioned during Plenary Session 3.

The third day of EAU18 started with a well-attended Plenary Session on prostate cancer. The session included several case-based debates, an overview of the most important PCa-related posters and the ESMO lecture. The main session was preceded by a short "game-changing session", which featured an update on immunotherapy in renal cell and bladder cancer, and a talk on the new standard of care for hormone-sensitive PCa.

Case-based debate on PET-CT

The majority of Plenary Session 3 was dedicated to a multidisciplinary case-based debate on PET-CT-detected oligometastatic disease, moderated by Briganti. It featured contributions from Prof. Silke Gillessen Sommer (CH) from the perspective of an oncologist, Prof. Steven Joniau (BE) as a urologist, Prof. Gert De Meerleer (BE) as a radiation therapist and finally Prof. Nicolas Mottet (FR) for the EAU Guidelines perspective.

The case as presented to the panel by Briganti concerned a 63-year-old patient who was classified as cN0, M0 through conventional imaging, but where the use of a PSMA PET-CT revealed a spread to a lymph node in the pre-sacral area and two bone lesions, both smaller than 1cm. This raised the patient’s status to cN1 and cM1.

The case-based debate on PET-CT-detected oligometastatic disease is moderated by Prof. Briganti (left). Prof. Mottet (FR) for the EAU Guidelines perspective. Prof. Gillessen Sommer, Joniau and De Meerleer argued treatment options from their perspective.

By Erika de Groot

Urodynamics, the link between LUTS and progressive neurogenic disease, and polypharmacy were some of the topics deliberated during the well-attended Plenary Session 4, "Contemporary storage Lower Urinary Tract Symptoms (LUTS) management", which was chaired by Prof. F.C. Fiona Burkhard (CH) and Prof. Chris Chapple GB.

Urodynamics

"In neurology, there are two main goals: to protect the upper urinary tract and to balance the lower urinary tract’s quality of life," stated Prof. Dr. Thomas Kessler (CH). In his lecture "Lower Urinary Tract Symptoms (LUTS) and stable neurogenic disease", he defined Urodynamics as a tool to assess the function of the lower urinary tract and to secure the upper urinary tract. Kessler said, "Solving a patient’s symptoms does not also mean also saving the upper urinary tract.”

According to Kessler, neurourology is a balancing act. "You have to individualise the management of your patients. Can the patient walk without assistance or is he in a wheelchair? But even then, the latter could have a very active lifestyle. Customised treatment is key; one size does not fit all.”

Progressive neurogenic disease

"LUTS change a patient’s conditions evolve," said Dr. Xavier Gamé (FR) in his lecture "LUTS and progressive neurogenic disease”. Gamé added that adapted management to different symptoms are available. He stated that follow-up is required to assess LUTS changes and to screen complications in MS patients.

Polypharmacy

According to Dr. Adrian Wagg (CA), there is little evidence on the link between polypharmacy and overactive bladder (OAB), but more for undifferentiated incontinence.

"Polypharmacy makes urinary incontinence more likely," said Wagg. In his lecture "Age, polypharmacy and OAB", he stated that when OAB drugs and other antimuscarinics are combined, these contribute to an overall anticholinergic burden. He said that this should be reduced wherever possible. Additionally, Wagg said that a formal, contextual medication review may help.

By Jen Tidman

The European Reference Network (ERN) eUROGEN is already the most proactive of the 24 ERNs approved and funded by the European Commission (EC), announced Mrs. Michelle Battye (GB) in a specialty session held yesterday.

The ERN unites 39 European healthcare providers in 11 EU member states in order to improve diagnoses and create more equitable access to high-quality treatment and care for patients with rare uro-rectogential diseases as well as complex conditions needing highly specialised surgery. "This is a completely innovative step change in healthcare. It is not a project; it’s a new form of collaboration that will continue," said Battye. Thirty million Europeans are affected by 6,000-8,000 rare diseases (“rare” being defined as fewer than 2,000 people) with many requiring surgical correction, some during the neonatal period or in childhood. Rare disease patients may need transitional or even life-long care provided by expert multidisciplinary teams (MDTs) in areas such as surgery, physiotherapy and psychotherapy.

When these patients cannot be adequately treated in their own country their case can be referred to an expert MDT. When these patients cannot be adequately treated in their own country their case can be referred to an expert MDT. "We saw a nice multidisciplinary discussion, which allowed the audience to see possible treatment options from different perspectives,” Briganti summarised. "Of course we always need evidence first, but there is certainly a role for expert opinion. We are waiting for strong evidence yet to come.”

On the timeframe of possible strong evidence for the advantage of upfront use of PET-CT, he said: “We might never ever see it. We are currently using PSMA, but in a few years or even months, we might have a better tracer. It’s a constantly evolving field.”

See related story on Page 2... Better PCa detection...
Better PCA detection with MRI, ultrasound

By Loky Kaizer

For EAU20 Congress participants who wanted to know more about the imaging options for prostate cancer after Planetary Session 3, Themeatic Session 4, focusing on both more state-of-the-art lectures, case discussions and abstract presentations.

The case for MRI and further developments in ultrasound were made by Prof. Jelle Barentsz (NL) and Georg Salomon (DE) respectively. Salomon showed much improved experimental results at 29MHz rather than 9MHz. Barentsz, noting that an MRI helps clarify ultrasound, hypothesised a combination of both: Ultrasound: two short exams for the patient with a superior end result.

Potential for ultrasound

The merits of (improved) ultrasound, when compared to multiparametric MRI and PET-CT, were of particular interest in a clinical case discussion that was moderated by Prof. Alexander Govorov (RU).

Mr. Derek Rosario (GB) spoke on some of the pitfalls of MRI usage: “Evidence at the moment does seem to show some value in clinical decision-making. However, we have not seen much high level of evidence. At the session, Dr. Axel Bex (NL) from the European Association of Urology (EAU) stated: “It is not just about the treatment,” said Winterbottom about prostate cancer. “It is also about the patients and their relatives.”

For Pledge 2: Talk about bladder cancer, he called for more open discussions about the fifth most common cancer in the world. Good quality, easily read to and understandable information that involves patients in its development was the core message of Pledge 3: Provide accessible patient information.

Giving the patients a voice

By Erika de Groot

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In his presentation on prostate cancer (PCa), Chairman of Eurougen Uomo and cancer survivor, Mr. Ken Mastro (GB) stated: “We are the EAU and we sustain awareness.” Prof. Castelo Branco, EAU, provided the means to improve both diagnosis and treatment, and support equity of management for all.

A bladder cancer survivor himself, Mr. Andrew Winterbottom (GB) urged people to support those who are in pain. Of Pledge 1: Listen to us, he said: “As we know a lot about the subject, too. We have seen how the lack of diagnosis, and treatment to aftercare. We can help [urologists] gain additional insights.”

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Underactive bladder: Management pitfalls
Thematic Session 1 examines complex cases

By Joel Vega

The optimal management of underactive bladder remains elusive and the wide variety of approaches taken by physicians were discussed yesterday in Thematic Session 1 which emphasised that the lack of a specific pathology has often led to under-diagnosis and ineffective treatments.

Chaired by Prof. Jean Nicolas Cornu (FR) and Salvador Ariandis (ES), issues such as defining underactive bladder (UAB) and the pathophysiological mechanisms were examined by speakers Mr. Nadir Osman (GB) and Dr. Tiago Antunes-Lopes (PT), respectively. Following the overview lectures, two cases were presented to look into the issue from various perspectives with Prof. Gommer Van Keveringe (BE) presenting the case of a man with Benign Prostatic Obstruction (BPO), and Prof. Andrea Tubaro that of a young woman with dysfunctional voiding problems.

Osman underscored the importance of properly defining UAB as he cited the ICS 2018 definition underactive bladder (UAB) and the pathophysiological mechanisms were examined by examining a patient with detrusor underactivity (DOA), as he noted that doing so would facilitate epidemiological studies, make the condition more understandable to patients, and prompt interest in research and drug development, among others. “But UAB symptom complex is desirable only if the diagnosis is sufficiently robust,” he said.

He also addressed the issue of whether UAB could be to detrusor underactivity (DOA) as overactive bladder (OAB) is to detrusor overactivity (DDA), as he noted that doing so would facilitate epidemiological studies, make the condition more understandable to patients, and prompt interest in research and drug development, among others. “But UAB symptom complex is desirable only if the diagnosis is sufficiently robust,” he said.

In his closing remarks, Osman said DUA is a common problem in patients with LUTS seen in secondary care. He added that there is little published clinical or scientific research, and that defining a symptom complex of UAB is “...difficult due to the overlap in symptoms of DUA with other LUT dysfunctions.”

Antunes-Lopes, on the other hand, said there is a lack of original studies on the causes and mechanisms of UAB/DUA, as he underscored that the condition is aging-related and multibacterial. “Aging, bladder outlet obstruction (BOD) and ischemia are putative causes of UAB/DUA. Contemporary views emphasise the importance of bladder afferent system,” he said.

“We know that UAB is a clinical entity which requires more studies. For female patients it is essential to have a multidisciplinary treatment, and for men, TURP may not work and certainly proper assessment is necessary. In all cases, tailored treatment is recommended and exhaustive conservative management should first be considered ahead of new therapies,” said Cornu.

Award Gallery
Currently, all guidelines recommend repeat biopsies for monitoring active surveillance for low-risk prostate cancer. However, there is no consensus on when or how to take the biopsies. Nor is there evidence to support the notion that biopsies could be omitted altogether.

Prostate cancer (PC) active surveillance (AS) has become standard of care and is the recommended treatment option for low-risk PC. Initial risk stratification is mainly based on Gleason grading done on tissue samples traditionally obtained by transrectal systematic 12-core random prostate biopsies. If diagnostic biopsies show no worse than Gleason 6 (Grade Group 2, PC is generally considered.

During AS, most guidelines recommend repeat biopsies as a key element of the surveillance protocol. These biopsies serve two purposes: 1. to detect and confirm or exclude malignancy and 2. to detect recanalization due to true biological progression.

Based on data from immediate radical prostatectomy series on patients eligible for AS, the rate of diagnostic misclassification has been estimated to be around 33–59% while the rate of true biological progression has been estimated to be around 5–11% per year. More reliable evaluation of the rate of true biological progression has become possible only recently, as exact serial rebiopsying of the initial low-grade lesions, as a function of time, can now be done owing to the emergence of the MRI-US fusion biopsy technology.

Because of the high rate of diagnostic misclassification, a confirmatory biopsy is recommended. The purpose is to exclude higher grade cancer. If patient is still found eligible for AS after confirmatory biopsies, follow-up biopsies are recommended to detect true biological progression during AS. Consensus exists that confirmatory biopsies should be taken within one year after diagnosis. However, it is less clear when should the follow-up biopsies be taken and what is the protocol recommendations vary from one to four years. In addition, additional triggers for rebiopsy have been used such as fast rising PSA or change in DRE during follow-up.

Biopsies, however, are not without a problem. In the PRIAS trial, one in five biopsies due to the complications, sepsis being the most feared one. Likely for this reason, it was found that compliance rate for repeat biopsies decreases gradually and is only 39% at 10 years after diagnosis while compliance rate for PSA follow-up remains high (90%). This finding was confirmed in SEER database analyses showing that less than 15% men underwent rebiopsy after two years. Furthermore, in the PRIAS trial, one in five biopsies taken during follow-up did not show reclassification and can thus be considered redundant. Therefore, the question is, can we better identify patients at risk for progression and, thus, in need for follow-up biopsy? Dr. perhaps, and even better, can we skip the biopsies for good?

Lessons from watchful waiting or “less active” surveillance series

Before PSA era a typical PC diagnosis was an incidental finding in TURP performed for obstructive urinary symptoms. These TURx Bc cancers were often considered “indolent” and no follow-up was exercised, thus, no follow-up biopsies were taken. Despite the lack of any form of follow-up (and biopsies), excellent long-term PC specific survival has been reported.

During the PSA era, more contemporary data from a randomized ProtecT trial is available. In this trial, immediate curative treatment was compared with monitoring. Monitoring was based on repeated PSA measurements only, while no routine follow-up biopsies were taken. Thus, ProtecT monitoring represents an intermediate between (pre-PSA era) watchful waiting and contemporary AS characterized by predefined follow-up biopsies and triggers for treatment. Despite the lack of follow-up biopsies, very low PC specific mortality was observed in the monitoring arm and there was no difference in PC specific survival between the treatment groups. Interestingly, more men in the monitoring arm developed metastatic disease. However, to date, there is no detailed data published on whether this is explained by the fact that intermediate and even high-risk PC patients were also randomized and thus allocated into the monitoring arm.

Combined, these data would suggest that the role of routine follow-up biopsies in low-risk prostate cancer could be questioned.

Better initial risk stratification to reduce diagnostic misclassification

A big leap forward would be to significantly decrease the rate of initial diagnostic misclassification, as it may occur even up to 40% of men considered eligible for AS. Since the publication of Epstein criteria for clinically insignificant tumor, several prediction tables and nomograms have been published to better predict the risk of progression. A recent study looked at the role of grade and found that it did not provide additive predictive value over base model during surveillance10. Also, the measured change in PCa3 over time was not associated with progression8.

Only a few studies have looked at the role of serial MRI during surveillance13. Besides being scarce, the published data suffers from lack of standardization and all published series are small, mainly retrospective and lack long term follow-up. Despite the weaknesses, all the trials suggest that serial MRI during AS may be helpful in identifying patients at risk for progression. Yet, the data does not support the notion that follow-up biopsies during prostate cancer active surveillance can be omitted. Future randomized trials such as Precision and SPGC-12 will hopefully shed more light on the role of AS at diagnosis and as a follow-up tool13,14.

Conclusion

Despite recent progress in the field of biomarkers and especially prostate MRI imaging, there is little evidence in the literature currently to support the notion that prostate biopsies could be dropped on patients under active surveillance for prostate cancer.

Editorial: Note: Due to space constraints, the reference list can be made available to interested readers upon request by sending an email to: communications@uroweb.org
Our innovative oncology platform is designed to specifically target a variety of challenging tumor types. We have developed a portfolio of active cancer immunotherapies, designed to alter the disease course by eliciting a robust and broad anti-cancer immune response while maintaining a favorable risk-benefit profile.

Multiple clinical trials are ongoing in collaboration with the NCI, NIH, academia and industry partners. Through numerous industry collaborations, we seek to explore the potential synergies of combining our immunotherapies with other immune-modulators.
Empowering the patient throughout this journey means, first of all, providing comprehensive and balanced information about the care process, about the therapeutic and observational options, and about all the relevant associated advantages and risks. Patients also need to play their part, by searching for and being open and receptive to this information. Information is necessary, but it is not enough. Patients need to be engaged in the decision-making process. To engage them and to improve informed values-based choices, clinicians should also take advantage from decision aid tools that provide explicit values clarification exercises, and patients should preferably fill and use them.

It has been demonstrated that the adoption of decision aids results in higher levels of engagement and lower decisional conflict related feelings about certain treatment option values. Lower rates of people who remained undecided and higher rates of patients choosing an option congruent with their values have also been reported.

All this process implies a radical change in the clinician’s relationship and in patients’ attitudes when facing the decision-making process, with reformed responsibilities. The clinician, who is the subject matter expert on the disease, becomes the technical-medical expert on the possible treatment options. Within this new relational frame, clinicians’ responsibilities for a shared decision-making process are both technical-medical and supportive of patients’ quality of life where patients have to take responsibility for a shared decision and jump on the empowerment process promoted by the clinician.

Rebalanced responsibility

Adopting a multidisciplinary approach can foster this radical change towards a rebalanced responsibility and a greater empowerment in the decision-making journey of both patients and clinicians. The presence of clinicians with different professional backgrounds may help create a common attitude about the disease and its management options, which can facilitate information exchange with patients. A multidisciplinary setting may also provide all optimal options equally presented within the same clinical practice.

Inter-specialist groups necessarily create a shared and fair dialog context and prevent dyadic asymmetrical relationships. In this inter-specialist group, the patient, but also his partner, is one of the specialized members, an expert on his life priorities and quality of life. He necessarily becomes an active subject of the conversation and his management options are equally shared within the same multidisciplinary setting, the need of patient empowerment in the treatment decision-making process may be soundly accomplished.

To relay the decision-making process for low-risk prostate cancer patients requires an active engagement of both clinicians and patients towards a shared choice. Traditional doctor-patient power roles and related functions and responsibilities need to be challenged towards a greater partnership with patients. Clinicians should take care of technical-medical duties, but also support patients’ quality of life by empowering promotion processes, while patients should take a greater responsibility and a leading role in their care process.

Fostering the creation and implementation of multidisciplinary settings may help tackle these challenges and support patient empowerment in the treatment decision-making process. We could conclude that there is need to reform the questions and instead of asking ourselves “What can a patient do?” or “What should clinicians do?”, a more valuable question could be “What should patients and clinicians do together?” to select the most effective way to reach a common goal, i.e. improving the patient’s health in its most comprehensive sense.

References


Monday 19 March 2018
Pathology is the gold standard for grading, staging and important for establishing treatment decisions in urothelial carcinomas (UC). Patients are treated according to the differentiation (grade) and the depth (stage) of their tumor.

The tumor/node/metastasis (TNM) staging system has been developed to help differentiate the various clinical carcinomas and to be a prognosticicator, and also allows considering the management and including patients into clinical trials according to their stage.

Generally different patient groups should be distinguished. UC is a disease with a very high metastatic potential and patients with metastatic disease should be treated with chemotherapy (CT)3. Major progress in recent years has made a major step forwards in suggesting a more personalized treatment options, such as which patient should be given BCG therapy and who should have an early cystectomy. With regards to MCBD and metastatic UC, pTNM still has the major role to play; probably the grade is underestimated and should be paid more attention, especially the reporting of extranodal spread of the tumor.

Recent papers could demonstrate that gene expression signatures could predict whether a patient would benefit from neoadjuvant therapy based- chemotherapy (NACT)14,15. The gene expression profile in some of these studies not only predicted the treatment outcomes and outcomes, which is supposed to be close to squamous cell UC, was associated with better survival, and more benefit of NACT and the p53-like subgroups, which is believed to be the role of this decision-making.

Another important treatment arm exists since 2014, which are the immune checkpoint inhibitors (ICI). Since Powles demonstrated a clear benefit in advanced metastatic disease, other studies could confirm this finding14,15. Nevertheless, it is still not clear what factors will be selected to receive this expensive medication, and whether pathology could play a role in this decision-making.

MIBC

Several important molecular findings have been described in this group of UC. Associations with low-grade pTa tumors, such as HRAS mutations, FGFR-3 mutations and PIK3CA have been described; some are known to be associated with the type of associated with good prognosis. On the other hand, we find completely different mutations in the high-grade tumors, such as TMB and the CTCL. With the help of the RNA-seq classification system, different molecular consensus subgroups of MIBC can be predicted, showing that luminal tumor subtypes had the best overall survival independent whether ICI was given or not. On the other hand, basal UC had the most benefit in overall survival when given ICI.

Metastatic disease

UC is a disease with a very high metastatic potential and patients with metastatic disease should be treated with chemotherapy (CT) in the TNM staging system.


Our family of journals — European Urology, European Urology Focus and European Urology Oncology — share a passion for urology, an unending commitment to patients, a dedication to multi-disciplinary science, and a continuous focus on quality. Just like European Urology Focus, our newest offspring European Urology Oncology sits shoulder-to-shoulder with the popular big sister.

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**Prevention of resistant bacterial infection**

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**Abstract:** Antibiotics are among the most commonly prescribed drugs used in human medicine. The prescription of antibiotics is a very common practice in urological setting too. But it has been estimated that 50% are not needed or not optimally prescribed.

The continued misuse and overuse of antibiotics are paralleled by the growing frequency of multidrug-resistant pathogenic strains. The evolution of resistant pathogens has developed into a worldwide health crisis, with elevated health costs and greater risk of poor patient outcomes. In hospital setting about 20% of bacterial infections are resistant to at least one drug. On the other hand, the antibiotic drug pipeline is drying up. Very few new molecules are currently introduced in urological armamentarium. Resistant strains spread rapidly and one death every six minutes in the world has been due to resistant bacterial infection.

**The clock is ticking... and this is the time to re-think our everyday clinical practice.**

All clinicians have an imperative responsibility to contribute to antibiotic stewardship programmes. The principal aim of antibiotic stewardship is:

- To optimize clinical outcomes while minimizing unintended consequences of antimicrobial use (such as, selection of pathogenic organisms and emergence of resistant pathogens (ESBL, MDR); and
- To reduce health care costs without adversely affecting the quality of care. In other words, limit inappropriate and excessive antibiotic use and improve and optimize therapy and clinical outcomes for the individual infected patient.

Antibiotic stewardship principles should be used in all health-related settings; prophylaxis, outpatients treatment, long-term care settings and hospitalized patients.

In everyday clinical practice, several aspects should be taken into account. In particular, the most important components of antimicrobial stewardship programs are:

- Regular training of staff in best use of antimicrobial agents;
- Adherence to local, national or international guidelines;
- Regular ward visits and consultation with infectious diseases physicians, with audit;
- Treatment outcome evaluation; and
- Monitoring and regular feedback to prescribers of their antimicrobial prescribing performance and local pathogen resistance profiles.

Adherence to guidelines

The adherence to international guidelines, in particular for the use of antimicrobial prophylaxis, is another important component of antimicrobial stewardship. Even if the use of prophylactic antibiotics before surgical procedures is a reasonable strategy to prevent postoperative infections, its use should be risk-adjusted according to the procedure to ensure that harms in terms of bacterial resistance in an individual and society do not outweigh the benefits.

In our recent paper we demonstrated that implementation of a monitored policy of adherence to EAU Guidelines on antibiotic prophylaxis for surgical urologic procedures results in lower total antibiotic consumption, reduced antibiotic resistance among uropathogens, and reduced costs without increasing the risk of postoperative infection.

On the other hand, in the management of patients affected by urinary tract infections, the principles of antimicrobial stewardship should be taken into account. A correct prescription of antibiotic is one of the most important components of antimicrobial stewardship and nine factors should be taken into account for selecting an antibiotic:

1. Spectrum of coverage (use only drugs active against uropathogens)
2. Patterns of resistance (take into account your local pathogen resistance profiles)
3. Efficacy or record for the specified infection (perform regular audits with your staff)
4. Efficacy or record for the specified infection (perform regular audits with your staff)
5. Efficacy or record for the specified infection (perform regular audits with your staff)
6. Toxicity
7. Formulation (intravenous vs. per os); if per os, assess bioavailability
8. Adherence/convenience (e.g. 2/a day vs. 6/a day)
9. Cost

Moreover, during antibiotic prescription, several other aspects should be taken into account and several “behaviours” should be avoided. Many patients become colonized with potentially pathogenic bacteria but are not infected, such as patients affected by asymptomatic bacteriuria or Foley catheter colonization, or presence of WBCs not always indicative of infection or the presence of fever due to other reason, not the positive culture. Bacterial colonization is not an infection! A specific urological setting in which we should improve antibiotic stewardship is the treatment of asymptomatic bacteriuria (ABU).

Asymptomatic bacteriuria is a common clinical condition that often leads to unnecessary antimicrobial use. The reduction of antibiotic exposure for asymptomatic bacteriuria is consequently an important issue for antimicrobial stewardship to reduce the emergence of multidrug-resistant strains. In the clinical setting we have an important issue that requires special attention: the role of ABU in women affected by recurrent urinary tract infections (rUTIs) in everyday clinical practice, young women affected by UTI show after antibiotic treatment asymptomatic periods associated sometimes with or without episodes, particularly when Enterococcus faecalis has been isolated. Moreover, ABU treatment is associated with a higher occurrence of antibiotic-resistant bacteria, indicating that ABU treatment in women with rUTIs is even potentially dangerous.*

**Take home messages**

- The therapeutic benefit of antibiotics should be balanced with their unintended adverse consequences.
- Inappropriate antibiotic use is associated with increased antibiotic resistance, adverse drug effects and Clostridium difficile infections.
- Antibiotic stewardship is important for preserving existing antibiotics and improving patient outcomes.
- The adherence to international guidelines (EAU) is able to reduce the costs of treatment and improve patients’ outcomes.
- Antibiotic prescribing should be prudent, thoughtful and rational.

In other words, please stick to the European Association of Urology Guidelines on Urological Infections.

**Interested readers can request for the references by sending an email to: communications@uroweb.org**

Monday 19 March
08.30-10.30 Plenary Session 6: Preventing urological disease: Future prospects
Complications of urethroplasty

History-taking and adequate investigations are crucial in successful urethroplasties

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The management of urethral strictures is fairly standard in a high-volume center. But there are many controversies like transaction versus non-transaction of bulbar urethra, flaps vs grafts, dorsal vs ventral BME, one stage vs two stage urethroplasty, etc.

Pelic fracture urethral defects are treated by anastomotic urethroplasty. Long anterior urethral strictures require augmentation with oral mucosa graft. The aim of this article is to highlight common complications and ways to avoid it.

Ours is a tertiary referral center for reconstructive urology. We get referrals from all over India and around the world. Since 1995, we have performed more than 2,663 urethroplasties including 1,157 anastomotic urethroplasties for pelvic fracture urethral defects. I was invited to demonstrate urethroplasties in more than 30 countries. This manuscript is based on the experience gained over the last three decades.

Preoperative

In our center, we the urology team member perform RUO and MCU X rays under C arm control in the OR. During the study there may be intubation (Figure 1) of the contrast in the veins or extravasation in the corpora spongiosa. Occasionally excess pressure during injection of the dye, bleeding may occur from the urethra, which usually is self-limiting.

Intraoperative complications

Bleeding

In cases of pelvic fracture urethral distraction defects urethral bleeding can occur during various steps. Bleeding may form bulbourethral arteries after urethral transection. I control it by applying manual compression using gauze. The arteries go into spasm. Residual bleeding if any is controlled with figure of 8 sutures or diathermy, preferably bipolar.

During corporal separation, I may inadvertently incise the corpora cavernosa usually in redo urethroplasty. In this situation, I suture the corporotomy immediately with absorbable sutures. The best way to avoid this complication is to consider that the two corpora are convex cylinders attached to each other in midline. I use sharp dissection with knife. I apply Allis tissue holding forceps and mastoid retractor (upside down) to give lateral traction on the corpora. I demonstrate the deep dorsal vein of the penis during corporal separation. I take the vein on one side of the midline. There may be tributaries which may bleed. In case the vein comes in the way of pubectomy, I ligate it.

Lateral to the vein on either side are dorsal penile arteries. Injury to the dorsal penile arteries may cause bleeding. More importantly, this would also affect the retrograde blood flow to the urethra. I bend the tip of diathermy and perform peristaltic elevation using coagulation current. This lateralizes the dorsal penile arteries avoiding injury.

Rectal injury

The posterior urethra is usually displaced upwards and backwards towards the rectum. Many patients have rectal injury and colostomy. In my experience, the safest way to protect the rectum is to place left index finger (non-dominant hand) in the rectum. It also gives me direction for further dissection. This complication has happened three times amongst more than 300 cases operated in our unit. Two patients had a history of rectal injury with colostomy in the past, the small rent in the rectum was closed in layers (Figure 2). After bulbo membranous anastomosis I sutured the inferior wall of corpora spongiosa around the closed rental rect as an additional layer. In the third patient I had to perform defunctioning colostomy with omental wrap between the rectum and urethra.

Shortening of bulbar urethra

I perform anastomotic urethroplasty mostly for traumatic bulbar strictures. The recurrence is uncommon but when it happens the stricture is obliterate, and requires redo anastomotic or augmented anastomotic urethroplasty. Repeated transections can lead to shortening of bulbar urethra.

Postoperative complications

Bleeding

Bleeding may occur from the perineum or from the site of oral graft harvesting. In the perineum usually it is the superficial perineal vessels, which cause bleeding, and hematology. Figure 8 stitches control bleeding from perineal vessels better than diathermy. Twice in the last two decades I had to re-explore the patient for bleeding from the perineum. Very rarely, bleeding can take place from urethra. From the oral cavity, bleeding usually occurs from the raw area, a small artery from the buccinator muscle or from the edge of the wound.

Foley’s catheter

The Foley catheter may slip out after urethroplasty. We have seen this with all Foley catheter brands. In such a situation I use two options. Best way is to perform urethroscope with bent instrument, insert guide wire through the urethra and then catheter over the guide wire. I have also used C Arm imaging for inserting guide wire and catheter (Figure 3).

False passage

Posterior urethra can be identified over a dilator, passed through the SPC tract. But this is a blind technique and rarely the dilator can come through a false passage through the bladder bypassing the posterior urethra. This can happen in case of Heygroves bougie which has a fixed curvature. Occasionally false passage exists due to previous endoscopic realignment and bulbar urethra (Figure 3) may be anastomosed to the false passage.

I use pediatric urethral dilators to insert through suprapubic tract in the posterior urethra. This pediatric dilators have a gentle curve and only at the tip. In long gaps I insert the left index finger to feel the tip of dilator at the apex of prostatic urethra. Alternatively, a rigid Mini Nephroscope can be passed in posterior urethra in case of high bladder. Using flexible cystoscope through the suprapubic cystostomy is the best method to identify the posterior urethra.

Risk of bulbar urethral necrosis

In posterior urethroplasty, after transaction of bulbar urethra, the blood flow is dependent on the retrograde flow from dorsal penile arteries and corporal arteries. In a butterfly fracture of pubic rami, the corporal blood supply may be inadequate leading to vascuographic ED. As discussed earlier, improper corporal separation and inferior pubectomy can cause damage to dorsal penile arteries, leading to ischemia to bulbar urethra and bulbar urethral necrosis (Figure 4).

Wound infection

The wound infection is rare after urethroplasty. Surgical site infections manifest itself as redness, discharge of pus and fever. The abscess requires drainage under anesthesia. It recovers with antibiotics. Rarely I have seen leak of urine from the site of urethralplasty leading to infection and abscess formation.

Complications of transpubic urethroplasty

Transpubic urethroplasty involves wrapping the anastomosis with omental flap. Inadequate mobilization of omentum may act as a band and can cause nausea, vomiting and abdominal pain.

Abdominal complications

Transpubic urethroplasty involves wrapping the anastomosis with omental flap. Inadequate mobilization of omentum may act as a band and can cause nausea, vomiting and abdominal pain.
Surgical procedures for kidney stones are performed very frequently because of its high prevalence. Due to technological advances of the surgical armamentarium, the use of flexible ureteroscopy (f-URS) has become widely adopted over the past years, when compared to percutaneous surgery and shock wave lithotripsy (Figure 1).

Since 2013, ureteroscopy is even considered as a first treatment option for all stones less than 20 mm following the guidelines of the European Association of Urology.

Extracorporeal shockwave lithotripsy Historically, the introduction of extracorporeal shockwave lithotripsy (ESWL) led to a revolution in stone management. While this treatment method stood the test of time, stone management gradually shifted towards an endoscopic approach.

Factors accounting for this trend in favor of f-URS are not well established, but certainly include the visual endoscopic control of stone fragmentation, the absence of stone density limitation, the possibility to treat patients irrespective of their body geometry, the ability to perform a visual stone analysis and the combination of the intervention with a post-procedural double-J catheter insertion in order to prevent an eventual “Steinstrasse” phenomenon.

Newer generation lithotripters offer a facilitated stereotactic freehand ultrasound control and certainly include the visual stone management. While this treatment method stood the test of time, single-session success rates.

Minimizing of ureteral access ulcers With minimization of ureteral ulcers, diameters of ureteral access sheaths are decreasing as well. We generally use a ureteral access sheath with the smallest external diameter if the ureteroscope fits into the inner lumen to decrease the risk of ureteral wall damage. The downside of the minimization is that only small stone fragments can be extracted. This may be overcome by creating smaller stone fragments during lithotripsy by using techniques like dusting or puncturing. Alternatively, larger stone fragments can be entrapped at the tip of the ureteral access sheath and removed en bloc under endoscopic vision.

Measure temperature Laser lithotripsy increases the temperature of the irrigation fluid and surrounding tissue in vicinity of the fibre tip, especially when working at high frequency and energy. This may happen in cases of irrigation when instruments are operating the working channel of the ureteroscope. This results in alternations of normal cellular functions and obstruction to the heat to learn about temperature rising during lithotripsy, it would be interesting to measure intrapelvic temperature during laser lithotripsy.

Measure pressure The physiological intrapelvic pressure and the threshold for pyeloureteral backflow are approximately to 40 mmHg respectively. The stone is the lowest during intrapelvic pressure in the distal ureter and the highest when operating in the renal pelvis. Intrapelvic pressure rises when irrigation pressure or hydrostatic column is increased. The surgeon, however, may choose to adjust the ureteral sheath of renal tubules on the long-term. To prevent these complications, it would be interesting for future developments to integrate a pressure measurement system to the ureteral access sheath or ureteroscope.

Robotics In the year 2012, a robotic system has been introduced for retrograde intrarenal surgery. By sitting at a computer station, the surgeon is able to deflect, rotate, advance and retract the ureteroscope by using two joysticks or a central wheel. With touch button controls and foot pedals, the operator can also change the speed of movements and can advance, retract and activate the laser fibre. Initial results are acceptable in terms of stone fragment efficiency, ergonomics and reduced radiation exposure. However, irrigation flow regulation is less adapted since it increases when increasing speed settings. Further improvements are necessary to improve ureteroscopy handling.

Single-use ureteroscopes The introduction of single-use flexible ureteroscopes (suf-URS) has only been an agent game changer of the current decade. Rather than the technological advancement, suf-URS have led to a complete rethink of the operating room logistics. Indeed, suf-URS offer the advantages to be readily available, always sterile and without traces of instrument wear such as deflection impairments. Also, suf-URS do not require a dedicated sterilization process. Further, their implementation for treating locations that involve instrument forcing may cap the risks entailed by eventual instrument damage and repair costs of reusable scopes. In terms of quality, some of the currently available suf-URS have visibility and maneuvering properties almost as good as contemporary digital reusable f-URS.

The downside of this new instrument facility is the risk of the appearance of low-cost suf-URS with low built quality on the market. Unexpected instrument deficiencies such as spontaneous loss of visibility, deflecting failure may become frequent and dangerous. Because of low instrument replacement costs, surgeons may be tempted to force maneuvering and risk irrigation breakage when facing a difficult access to a urinary cavity. Instrument failure may lead to disastrous complications, eventually leading to open surgical extraction of a retained instrument. Therefore, it is of utmost importance that suf-URS have the same great care as for reusable f-URS. Forcing suf-URS should only be done in expert hands.

3D visualisation and image integration The use of an iPad for kidney visualization was first presented for percutaneous access to the pyelocaliceal system in 2013. Further developments towards augmented reality, 3D endorenal view and live stereoscopic extracorporeal imaging of intrarenal stone burden are to be expected and may facilitate navigation and further improve stone clearance in the near future.

Laser generators and settings Currently available Ho:YAG generators combine up to four laser beams, allowing for pulsed firing frequencies up to 80 Hz, with or without Moses-capacity. Although such improvements may enhance stone fragmentation, a more trivial limitation remains unresolved: endoscopic visibility impairment due to small floating fragments (“dust”). The latter limitation can only be overcome by improving irrigation flow, which will probably parallel further future miniaturization of scopes.

We currently recommend to use low energy settings (e.g. 4.2 J up to 8 J) to limit the risk of eventual fire on tissue, with a stepwise increase in stone fragments when moving to the highest energy (up to 15–16 J) to reach an acceptable visibility for secure stone fragmentation. Consequently, we currently do not see any advantage of high power laser generator capabilities for lithotripsy and rather question whether other energy sources can be used for stone fragmentation.

Rethinking definitions: Stone free rate, fragments and dust Whatever laser settings are used, Ho:YAG lithotripsy will produce a mixture of small fragments with floating capacity (commonly called “dust”) and of more sizable fragments. The latter may eventually be accessible to basket retrieval and allow stone analysis, while the so-called dust seems to evacuate spontaneously within less than a week. Most authors agree that fragments <3 mm are considered to pass spontaneously an undamaged ureter.

Nevertheless, the natural history of such fragments is unclear and it is conceivable that de novo crystallization may appear on the basis of small stone fragments retained in the kidney. This is typically found after ESWL with a risk of stone recurrence. Therefore, the definition of a stone-free status may be challenged in future studies and tiny fragment residuals shall be documented whenever present in follow-up imaging.

Evacuation of stone fragments To achieve endoscopic stone-free status, it would be interesting for future developments to integrate active suction facility for lithotripsy, leading to low intrarenal pressure and sustained efflux of stone fragmentation products.

Double-J catheter tolerance Many efforts have been put to reduce double-J catheter morbidity, but neither geometry, length, material proprieties, nor catheter coating variations have been successful. Novelties such as the suture-like ending J-Fil catheter may overcome this long-lasting burden.

Stone disease: Symptom of another disease Awareness among urologists and primary health care givers is high about erectile dysfunction as symptom of an increased risk of coronary heart disease. This is not valid for stone disease, even though the relationship has been established in fact, stone disease is the symptom of a myriad of public health threats. In a majority of patients, pathophysiology of stone disease is linked to the same nutritional habits that may lead to metabolic syndrome.

Moreover, hypercalciuria may be linked to wider metabolic imbalances resulting in osteoporosis, if not readily recognized. It is therefore of utmost importance to perform a metabolic evaluation of every stone former, irrespective of their age or number of stone episodes. The awareness about this threat among urologists and primary health care givers is low and has to increase in the years to come.

Patient experience during their hospital journey Lately, patient experience and health outcome has become a high priority in health care.* In the near future, reimbursement of treatments may become linked to care giver’s performance as measured by patient’s experience metrics. “Sufficient information given about treatment” and “sufficient explanation of risks and benefits of surgery” were significantly associated with a high patient’s satisfaction score in a recent study on emergency abdominal surgery*

Informative procedural brochures and videos are the basis for a well-informed consent.

Faster stone clearance In the years to come, development of instruments and accessories devices for endoscopic stone treatment would allow faster stone clearance, while ensuring low intrarenal pressure (Figure 2). Multimodal integration of extracorporeal endoscopic vision, live extracorporeal imaging of the pyelocalyceal system, pressure and temperature control and tensile force feedback may improve navigation, possibly allowing for more rapid and safer endoscopic procedures.

Editorial Note: Due to space constraints, the reference list can be made available to interested readers upon request by sending an email to communications@uroweb.org

Tuesday 20 March 08:00-10:30: Plenary Session 7, Stones
TOOKAD® (padeliporfin) 185 mg or 364 mg powder for solution for Injektion

Abbreviated prescribing information — please consult the full product characteristics before prescribing.

This medicinal product is subject to additional monitoring. This will allow quick identification of new safety information. Healthcare professionals are asked to report any suspected adverse reactions.

Therapeutic indications: TOOKAD is indicated as monotherapy for adult patients with previously untreated, unilateral, low-risk prostate cancer with a life expectancy of 10 years and:

- Clinical stage T1c or T2a - Gleason Score 4 or 5, on the basis of high-resolution biopsy strategies - PSA ≥ 10 ng/mL - 3 positive cancer cores with a maximum cancer core length of 5 mm in any one core or ≥ 3 positive cancer cores with a ≤ 50% cancer involvement in any one core or a PSA density ≤ 0.15 ng/mL/cm³.

Dosage and method of administration: TOOKAD is restricted to hospital use only. It should only be used by personnel trained in the Vascular-Targeted Photodynamic Therapy (VTP) procedure. The recommended posology of TOOKAD is one single dose of 3.64 mg/kg of padeliporfin. TOOKAD is administered as part of local VTP. The VTP procedure is performed under general anaesthetic after rectal preparation. Prophylactic antibiotics and alpha-blockers may be prescribed at the physician's discretion. Retreatment of the same sites or sequential treatment of the contralateral lobe of the prostate are not recommended.

Special warnings and precautions for use: TOOKAD should be used with caution, in patients with renal impairment or in elderly patients due to dose adjustment needed. The medicinal product contains porphyrin. Information for patients (TOOKAD) - The solution is administered by intravenous injection over 10 minutes. Then the prostate is illuminated immediately for 22 minutes by laser light at 785 nm delivered via intravesical optical fibres from a laser device at a power of 120 mW/cm² of fibre, delivering an energy of 200 J/cm³. Treatment should not be undertaken in patients where a Light Density Index (LDI) is ≥ 150 needed. See the SmPC for further instructions. Simultaneous treatment of both prostate lobes was associated with an inferior outcome in clinical trials. Follow-up post TOOKAD-VTP. Biopsy is recommended at 2-4 years and 7 years post VTP, with additional biopsy if indicated (e.g. when PSA increases ≥ 10% per year).

Non Thermal Light

TOOKAD is indicated as monotherapy for adult patients with previously untreated, unilateral, low-risk prostate cancer with a life expectancy of 10 years and:

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TOOKAD has no interaction on ability to drive and machine. Patients should avoid exposure to direct sunlight (including through windows) and all bright light for 48 hours post-procedure to minimize the risk of damage to the skin and eyes. Potential adverse effects on ability to drive and machines.

Fertility, pregnancy and lactation: The use of medicinal products that are substrates of OATP1B1 or OATP1B3 (repaglinide, atorvastatin, pravastatin, propranolol, simvastatin, glimepiride, glibenclamide) for which concentration-dependent serious adverse events have been observed should be avoided on the day of TOOKAD infusion and for at least 24 hours after administration. Medicinal products which have potential phototoxic effects (such as tetracyclines, sulphonamides, quinolones, phenothiazines, sulfonamide hypoglycaemic agents, thiazides, diuretics, angiotensin-converting enzyme inhibitors) should be stopped at least 10 days before the procedure with TOOKAD and for at least 3 days after the procedure. The use of medicinal products which have potential phototoxic effects should be stopped at least 10 days before the procedure with TOOKAD. Medicinal products that prevent or reduce photo-aggregation should not be started for at least 3 days after the procedure.

Contraindications: TOOKAD should only be administered after careful clinical evaluation, to patients with a history of acute retinal/inflammatory bowel disease or any condition that may increase the risk of retinal necrosis formation. Use in patients with abnormal clotting. Patients with abnormal clotting may develop excessive bleeding due to the insertion of the needles required to position the light fibres.

Interactions: The use of medicinal products that are substrates of OATP1B1 or OATP1B3 (repaglinide, atorvastatin, pravastatin, propranolol, simvastatin, glimepiride, glibenclamide) for which concentration-dependent serious adverse events have been observed should be avoided on the day of TOOKAD infusion and for at least 24 hours after administration. Medicinal products which have potential phototoxic effects (such as tetracyclines, sulphonamides, quinolones, phenothiazines, sulfonamide hypoglycaemic agents, thiazides, diuretics, angiotensin-converting enzyme inhibitors) should be stopped at least 10 days before the procedure with TOOKAD and for at least 3 days after the procedure. In patients with renal impairment or in elderly patients due to dose adjustment needed. The medicinal product contains porphyrin. Information for patients (TOOKAD) - The solution is administered by intravenous injection over 10 minutes. Then the prostate is illuminated immediately for 22 minutes by laser light at 785 nm delivered via intravesical optical fibres from a laser device at a power of 120 mW/cm² of fibre, delivering an energy of 200 J/cm³. Treatment should not be undertaken in patients where a Light Density Index (LDI) is ≥ 150 needed. See the SmPC for further instructions. Simultaneous treatment of both prostate lobes was associated with an inferior outcome in clinical trials. Follow-up post TOOKAD-VTP. Biopsy is recommended at 2-4 years and 7 years post VTP, with additional biopsy if indicated (e.g. when PSA increases ≥ 10% per year).

OATP1B1 50% cancer involvement in any one core or a PSA density ≤ 0.15 ng/mL/cm³.
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**Bladder cancer (BC) is the most frequent among urological tumors and the second most common UC arising from renal pelvis, ureters, and urethra. It is the ninth most common cancer in the world.**

**Management of advanced UC**

Recent studies have investigated the role of IC as maintenance in patients who experience at least a stable disease (SD) in first-line chemotherapy. An ongoing, randomized, phase 3 trial (Bladder-200, NCT02629383), is evaluating avelumab, an anti-PD-L1 antibody, plus BSC versus BSC alone, in patients with advanced BC with disease progression during IC therapy. The results of this trial will be the first presented with an immunotherapy approach in this context.

**Future prospects: Emerging challenges with the use of IC**

In the salvage therapy of metastatic UC, combination immunotherapy may result in augmented ORR and enhanced OS when compared with IC alone. The early results with double regime use (i.e., anti-PD-L1+anti-CTLA4) or even the triple regimen use (anti-PD-L1/anti-CTLA4+anti-PD-1) are promising. In a post-hoc analysis of IMvigor210 study, approximately 35% delayed responses were observed after the first evidence of PD, denoting a disease-modifying activity induced by immunotherapy that is still largely unaccounted for.

Response to chemotherapy after IC will represent another future challenge, and the optimal biomarkers for early identification of the conclusion of the ongoing phase 3 trials in the first-line. Finally, the search for the optimal biomarker approach will necessarily require harmonisation, and new research, and it is possible that renewed perspectives may come from academia and pharmaceutical company interest.

In the first-line metastatic setting, biomarker results are promisingly described for atezolizumab and pembrolizumab in patients who are ineligible to receive cisplatin-based chemotherapy.

In summary, there is currently no evidence supporting the PD-L1 use as a biomarker for selecting patients for IC therapy in chemotherapy-naive patients, and definitive conclusions will be likely drawn with the results of the ongoing, randomized, phase 3 trials, that are currently open in the following setting (NCT02393535, NCT02809836, NCT2752421, NCT17035968).

Regarding cohort 2 of IMvigor210 study, in contrast with the results obtained in the cohort 1 of the same trial, patients with higher expression of PD-L1 (i.e., IC ≥ 3+) had better ORR (26%) than the ones with no or weak expression (IC 0+). Similar trend was observed for OS, as median OS in IC2/3+ population was 24.5 months (95% CI: 9.0–NE) versus 6.5 months (95% CI: 4.4–8.7) for IC 0+. Most noteworthy, several patients with IC ≥ 3+ were obtained that may be used for patient enrichment pending validation. These results included the association between the T-effector (Teff) gene signature (i.e., expression of CCR4, granzymes, perforin, cytokines and other factors) and PD-L1 IC status, as well as between the expression of multiple immune regulators (e.g., INPP4B, IDO1, IDO2, CTLA4, IDO1, PD-1, CD244) and PD-L1 status.

Furthermore, two key factors were associated with avelumab response: T-effector gene signature and IC1 phenotype, restoring sensitivity to PD-L1 inhibitors and immune checkpoint, respectively, recognizing the importance of T-cell infiltrate pathways and immune checkpoints inhibitors (ICI).

**PD-1 and PD-L1 checkpoint inhibitors have garnered recent attention based on clinical trial data.**

The PD-L1 inhibitor atezolizumab and the PD-1 inhibitor pembrolizumab have been approved for the treatment of patients with locally advanced or metastatic UC who have disease progression during or after standard of care chemotherapy or within 12 months of neoadjuvant or adjuvant platinum-containing chemotherapy.

Bladder cancer (BC) is the most frequent among urological tumors and the second most common UC arising from renal pelvis, ureters and urethra. It is the ninth most common cancer in the world. The current treatment modalities for advanced UC include standard of care chemotherapy and IC.

Recent studies have investigated the role of IC, as maintenance in patients who experience at least a stable disease (SD) in first-line chemotherapy. An ongoing, randomized, phase 3 trial (Bladder-200, NCT02629383), is evaluating avelumab, an anti-PD-L1 antibody, plus BSC versus BSC alone, in patients with advanced BC with disease progression during IC therapy. The results of this trial will be the first presented with an immunotherapy approach in this context.

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Sexual trauma of the male genital organs

Thematic Session 18: Complications in external genitalia surgery

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In some, rare cases, sexual activity can lead to dangerous traumas. Sexual trauma is more frequent in men (56 %) than in women. It can happen during heterosexual, homosexual or auto-erotic sexual practices. In many cases, sexual trauma causes intense sense of shame which delays the presentation to a physician. This delay may aggravate the negative effects of the trauma itself.

Reviewed from statistical side, infectious complications of sexual activity (such as urinary tract infections or sexual transmitted diseases) are much more frequent than sexual trauma. However, the psychological strain for the patient concerned is high after the trauma. Even when the end of the object is still out of the body, it is reasonable to do a fluoroscopy before trying to pull it out, to see which side and shape the part of the object inside the bladder has.

The purpose of this review is to present and categorize sexual trauma and propose ways to solve the problems caused by them.

Trauma of urethra and bladder

Most traumas of the urethra are caused by auto-erotic practices. Different foreign bodies are inserted into the meatus of the urethra to achieve sexual stimulation. This can lead to direct perforation of the urethra, mostly in the navicular fossa or the bulb part. In most cases, this problem can be solved by removal of the foreign body. Endoscopic removal might be challenging: Parts of a chemical test glass broken within the urethra are for example difficult to grab using endoscopic graspers.

Urethrocystoscopy has to be performed in every case to be sure that all foreign bodies have been removed and to document the extent of the injury. Afterwards, in most cases placement of a transurethral catheter is mandatory, which may be removed after one week. In cases, however, the surgeon has to cut the ring. Patients are often not circumcised because the clinical picture is not consistent with the urethral foreign body injury and the history of the trauma. During catheter removal, a urethrogram can be performed to document complete healing of the urethral injury.

Only in rare cases with severe injury, an open surgical revision of the urethra is needed, for example in cases with urethral fistulas. If the foreign body cannot be removed endoscopically, for example, because a knot in an electrical cable is stuck in the urethra, open surgery is also necessary.

Direct rupture of the male urethra during sexual intercourse is rare – and may also be worked up with urethrography and urethrocystoscopy. Treatment is done conservatively with a catheter placed over a guide wire. Surgical delay has to be avoided due to the extent of the trauma. Direct trauma to the female urethra during sexual intercourse is very infrequent. However, distal location of the female urethra during insertion of the erected penis has been documented in cases of vaginal atrophy or agenesis. This can lead to pain and even stress incontinence.

After all cases, the patient should have an urological follow-up including uroflowmetry because urethral strictures may occur as a late complication which can be treated either with endoscopic incision (laser or cold knife) or with urethroplasty according to length and severity of the stricture.

Foreign bodies in the bladder are more frequent in women than in men due to the length of the urethra. Various objects like cables, pencils or needles have been found in bladders in our clinical experience. Even when the end of the object is still out of the body, it is reasonable to do a fluoroscopy before trying to pull it out, to see which side and shape the part of the object inside the bladder has.

We have seen electric cables forming a knot inside the bladder which had to be milled using the stone punch before removing it. A pencil in the bladder could be broken with the holmium laser, the pieces were removed with an endoscopic grasper. Candle or wooden objects are hard to catch endoscopically because they drift in the dome of the bladder. In all cases, the bladder has to be inspected carefully for bladder wall injuries. Small extraperitoneal injuries can be treated conservatively with a catheter for a minimum of one week and cystography before catheter removal. Intraperitoneal or big extraperitoneal bladder wall injuries have to be treated with open surgery immediately.

If an object cannot be removed from the bladder endoscopically, a suction catheter is the treatment of choice. Traumatic bladder ruptures due to sexual intercourse are very rare and might only occur in patients performing hardcore sexual acts with a very full bladder, mostly after intake of a larger quantity of alcohol. The treatment required is open surgery.

Penile trauma

a) Rupture of the frenulum and paraphimosis

Rupture of the penile frenulum during sexual intercourse represents the most frequent sexual trauma in daily urological practice. A strap can be detached with tongs or a device for cutting wooden objects are hard to catch endoscopically because they drift in the dome of the bladder. In all cases, the bladder has to be inspected carefully for bladder wall injuries. Small extraperitoneal injuries can be treated conservatively with a catheter for a minimum of one week and cystography before catheter removal. Intraperitoneal or big extraperitoneal bladder wall injuries have to be treated with open surgery immediately.

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d) Penile strangulation

A rare type of penile trauma is strangulation with constriction devices placed around the penis (cock rings) for auto-erotic purposes or to maintain longer erections. In some cases, the device cannot be removed by the patient at the end of the sexual “procedure” because of a swelling of the penis. Patients develop a kind of priapism, leading to ischemia, thrombosis of the corpus cavernosum and ischemia. Additionally, the patient might suffer from urinary retention.

Unfortunately, they sometimes present in the clinic many hours or even days after the start of the incarceration when severe damage to the penile tissue has already happened. The first task for the surgeon is to remove the ring. This might be time-consuming, therefore the physician should not forget to place a suprapubic urinary catheter first before starting with the ring. When patients present early (<10 hours) with grade one to three injury, puncture of the corpora of aspiration and the blood may lead to detumescence and allows removal of the ring without destroying it. In most cases, however, the surgeon has to cut the ring.

The main problem are metal rings. Thin ones can be detached with tongs or a device for cutting finger rings which may be in supply at the Department of Traumatology. Another possibility are diamond cutters to be borrowed from oral surgery. However, dealing with a stainless steel ring of more than one centimeter in size, placed around the basis of the penis and the scrotum, only a hand-held power tool (power cut) provided by fire fighters could help.

Under general anesthesia, we first placed a thin palm size catheter to drain the penis and the skin to prevent skin injury by the power tool. We used saline and an irrigation system of TUR-P for coagulating and had to place a fire-proof drapery on the patient. The anesthesiologist was advised to use normal air instead of pure oxygen due to flying firebrands. After removal of the ring, the penis was disinfected and draped (sterile) to remove necrosis and repair the damaged skin. In other more severe cases, the necrosis of penile (jum-Jamptuation) has been reported when there was already an ischemic necrosis of the distal part.

d) Open trauma of the penis

Open trauma of the penis might happen due to dislocation of an intravaginal contraceptive device (loop) into the vagina or due to piercings worn by the female or male partner during intercourse. Injuries caused by a deep bite during fellatio have also been reported – this could lead to an infection with necrotizing fasciitis in worst case.

Some years ago, a special injury was called “Morbus Kobold” in Germany, named after a type of vacuum cleaner manufactured by the Vorwerk Company. Several men held their penis into the machine for auto-erotic purposes, and got severely injured by the rotating parts. The company was informed about this risk during the latter part of the 1970s and changed the construction of the vacuum cleaner to prevent these injuries.

Trauma of scrotum and testes

A minority of testicular torsions occur during sexual intercourse. Therefore, patients with persistent testicular pain after intercourse should see a physician immediately because the operative therapy has to be carried out within five to six hours to prevent damage of the testicular tissue due to ischemia.

There are reports of incarceration of the testicle between the pelvic bones of the partners during rough sexual practices leading to a rupture of the tunica albuginea – these are the metal ring and have to be reconstructed during open surgery.

Some patients using cock rings or other constricting devices like cords not only pull the penis through the ring but also the scrotum with the testicles. This may lead to severe swelling, incarceration and ischemia. In these cases, the scrotum has to be opened too during the operative revision after removal of the constricting device (see figure) and the testicles have to be inspected. Necrotic tissue has to be removed.

Conclusion

Sexual trauma of the urethra, bladder or male genital organs can be demanding due to the wide variety of mechanisms of injury and the diversity of foreign bodies used for auto-erotic stimulation or sexual intercourse. Removal of foreign bodies requires care, manual skills and often interdisciplinary cooperation.

Monday 19 March 10.30-12.00: Thematic Session 18, Complications in external genitalia surgery

Monday, 19 March 2018
What is STEPS?

STEPS, or “Sessions To Evaluate ProgresS in the management of urological cancers”, is a programme specifically designed for recently specialised onco-urologists who want to learn directly from world-leading experts in bladder, prostate, renal and testicular cancers. The CME-accredited programme is a fundamental part of the EAU/ESOU strategic partnership with Ipsen. It is founded on our shared commitment to the education of young urologists.

Bringing together a multinational group of medical professionals across several areas of expertise, and with different experiences, allows the fellows to see a variety of new treatment possibilities. It can highlight the pitfalls and solutions provided by diverse approaches. It also opens the door to creating international ties among medical practitioners, and a networking opportunity that can prove invaluable for the careers of young clinicians.

“STEPS connects younger urologists from different countries - it’s very interactive with lots of new information and data discussed” STEPS fellow 2018

Who should apply?

Recently specialised clinicians with a firm interest in the management of urological cancers, who:
- Can demonstrate support from their Head of Department
- Are keen to participate in ESOU and EAU programs
- Understand and speak English fluently

“Within STEPS I really like the enthusiasm of the delegates and the interaction I can have with them as an expert” Peter Mulders, STEPS mentor 2018

Applications now open!

Visit Ipsen booth E15 during EAU18 to learn more

Find out more about STEPS from the ESOU website: http://uroweb.org/section/esou/information/
Penile transplantation is a novel treatment strategy for severe penile disfigurement. To reconstruct surgery, replacing tissues with tissues is the goal. Given the penis' complex architecture required for its function, transplantation and penetrative intercourse, no other tissues in the body are similar. Phalloplasty using soft tissues from the arm, leg, or other areas achieve satisfactory cosmetic results. However, neophallics have no erectile capability without implanting a penile prosthesis, which is delayed from the time of transplantation by approximately one year to allow the development of protective sensation and is fraught with complication rates approaching 40%. The South African experience suggests that even when a neophallus is successfully implanted, it cannot withstand the physical demands of frequent sexual intercourse. Nephposus fluid transport capabilities are also less than ideal with complications including fistulas and strictures at rates of 14% to 48%. With the presence of infection and success in vasculated composite allotransplantation (VCA) such as face and arm transplantation, penile transplantation has become a reality.

To date, there have been four attempts at human penile transplantation, three of which were successful. The first documented case was performed in 2006 in China on a 42-year-old man who lost his entire penile tissues in a traumatic accident eight months prior. Although there were no signs of rejection and the patient was able to spontaneously void on post-operative Day 12, the transplanted penis was removed on post-operative Day 14 due to “a severe psychological problem of the recipient and his wife.”

The South African team and first successful human penile transplantation was performed in December 2014 at the Tygerberg Academic Hospital in South Africa. The 28-year-old man lost his penile tissues due to infectious complications of a radio circumscription performed three years earlier. This case has the longest documented follow-up of 36 months with encouraging results. By 24 months, the patient did not experience an episode of rejection, was having unaided erections with normal orgasm and ejaculation that was satisfactory to impregnate his girlfriend. Most importantly, the patient has fully accepted his transplanted penis and his quality of life is significantly improved. His immunosuppression regimen consists of prednisone, tacrolimus, and azathioprine and complications thereof include acne and hypertension, which resolved with dose adjustment, and a successfully treated episode of a supra-patellar bursa fungal infection. The same group has recently performed their second penile transplantation (4th penile transplant overall) April 2017, of which the results and follow-up have not been published.

The second successful penile transplant was performed at the Massachusetts General Hospital May 2016 by the 64-year-old recipient had a penectomy for penile cancer four years prior. After seven months of follow-up the patient had had two acute rejection episodes, has partial penile sensation and erectile function, and is voiding spontaneously. In both reported-successful penile transplantsations, recipients required several additional procedures for complications including hematoma evacuation, eschar debridement, and uretralatracheal fistula closures.

Thorough patient counselling Given the complexity of penile transplantation is life-enhancing and not life-saving, thorough discussions with the patient regarding the risks and benefits of the procedure are paramount. In the documented cases, patients underwent extensive psychological evaluation with assessment of motivation and treatment adherence. Treatment teams emphasized discussions regarding possible psychological rejection of the graft, unmet expectations of treatment outcomes, graft failure, and social stigmatization. Patients were also counseled on the need of lifelong immunosuppression and the associated risks including infection and malignancy. Psychological counseling and support is continued following the procedure. Informed society and organ donors of the benefit of this procedure to facilitate the development of this very intimate organ is crucial. To this end, the South African team created a neophallus for the donor, which was critical for the consent of the donor’s family.

To date, penile transplantation has been performed for complete loss of penile tissues either by trauma or iatrogenis. Likely, this will be the largest population of patients who will benefit from penile transplantation. Complications of immunosuppression result in varying degrees of penile tissue loss in 250 young men per year. The protracted military conflicts in the Middle East with the extensive use of buried improvised explosive devices and improved survival in battlefield trauma has resulted in large number of young soldiers with disfiguring genital trauma. Other indications include congenital penile disfigurement in the setting of bladder extrophy and disorders of sexual development. There is no rigorous data, as of yet, to determine whether penile transplantation will be desired for gender reassignment in the transgender population.

Thus, one of the most important factors for the indication of penile transplantation will be the patient’s wishes and desires for their genital reconstruction. If only cosmetics is desired, then a reconstructive neophallus may be sufficient. If the patient desires free functional penile sexual intercourse from the beginning, engraftment to the urethra then replacing tissue with like tissue using penile transplantation may be the best option. One of the biggest impediments to widely adopting this treatment modality is the significant risk associated with life-long immunosuppression. This includes hypertension, renal failure, neuropathy, infection, and increased risk for developing a malignancy. Existing immunosuppression research seeking to achieve immune tolerance of the recipient’s immune system to the transplanted penis by using novel small molecules and cell tail infusions may lead to therapies that minimize the current risks of immunosuppression. This would greatly alter the risk-benefit ratio of penile transplantation and likely greatly increase its acceptance.

Another obstacle to broad implementation, as with most other forms of VCA, are the highly skilled multidisciplinary teams including specialists such as psychiatrists, counselors, organ procurement coordinators, urologists, and plastic surgeons. They are required for patient identification, assessment, counseling, transplantation coordination, and performing the technically challenging procedures of penile preservation. Unlike kidneys transplantations, which on average require three anastomoses – one artery, one vein, and a urinary anastomosis, the penis may require up to 10 small microanastomoses depending on the anatomy and surgical approach – two dorsal arteries, two cavernosal arteries, two external pudendal arteries, deep dorsal vein, two dorsal nerves, and the urethra, not including joining the tunica albuginea and skin. None of the successful cases have employed all of these anastomoses but variable combinations to ensure rejection and technical feasibility.

More research needed As with all novel clinical endeavors, research is required to better understand the challenges that lie ahead. Given the uniqueness of penile architecture, function, and certain tissues, it is unclear based on prior VCA or solid organ transplantation how penile tissues may undergo rejection and how this will affect its function. Skin is commonly considered one of the most immunogenic tissues in VCA and often monitored for early signs of rejection. Our preliminary research (not yet published) suggests that the urethra may also elicit a rejection response. Given the sensitivity of penile microvasculature, early rejection may be detected by new onset issues in erectile function. Penile transplantation basic science and translational science is complicated by the poor recapitulation of penile transplantation in rodent models and the ethical challenges in using larger species such as canines and monkeys. There are many excellent opportunities and discoveries to be made to better understand and optimize penile transplantation.

Penile transplantation is an ethically and technically challenging treatment for the devastating loss of penile tissue and function. It includes the significant risk of life-long immunosuppression, surgery, and psychological stress. However, it may provide natural erectile function and more robust fluid transport function than current phalloplasty procedures can offer. Advances in research of immunosuppression and penile transplantation will hopefully improve the success of this operation, minimize its side effects, and offer an effective management for the very difficult to treat condition of severe penile disfigurement.

References

Monday, 19 March 2018

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Bone metabolism and stones

No specific treatment is available for efficiently counteracting impaired bone metabolism

demineralization whereas the latter only accounts for increased intestinal calcium absorption. Daily calcium excretion depends upon several factors including calcium diet, intestinal absorption and bone resorption: in PPI patients, an increased calcium intake would decrease PTH level and thus presumably bone resorption but at the expense of an increased calciuria (i.e. would increase stone risk factors). PPI is encountered in 30-50% of hypercalciuric renal stone patients. High serum PTH is associated with 63% of osteoporosis and 35% of fractures14, as increased intracortical bone turnover results into trabecularisation of the inner cortical bone and increased cortical porosity responsible for impaired bone strength. In fact, cortical bone strength is probably more dependent on cortical porosity than changes in mineralization or mechanical properties of the bone matrix. However, in renal distal tubular acidosis, calciuria is also on bone metabolism through activation of the vitamin receptor (VDR) localized both on osteoblasts and osteoclasts, leading to synthesis of unmineralized osteoid bone which is ultimately degraded. Of notice, the hallmark features of bone demineralization and hypercalciuria encountered in PPI require the combination action of PTH and VDR activation (altogether with an activation of the Calcium receptor (CaSR) in the ascending limb of Henle loop). Bone demineralization and VDR signaling Several lines of evidence demonstrate a VDR activation independently of serum calcitriol. Hypercalcemic renal stone accounting for the phenotype: increased intestinal calcium absorption, bone resorption and hypercalciuria. Indeed, a high serum calciocitrol activating VDR signaling, noteworthily in gut and bones, is encountered in 30-50% of cases8,9,10, thus raising the issue of the underlying pathophysiological process: is it a gut-kidney-bone axis? and if so, how?
Percutaneous nephrolithotomy (PNL) is still considered as a first-line treatment for large stones, despite many modern retrograde “per vias naturales” techniques that are becoming more popular in bigger and bigger stones. There is no doubt that for staghorn stones PNL is a gold standard.

From its beginning PNL underwent many changes and developments. Tract formation with allien telescopic dilators was changed for 1st generation dilators, but as the instrument size was decreasing, also other single-step dilation techniques were developed. The next field of interest was tract size, as it was considered as an important step toward decreasing bleeding, hemoglobin drop, that were also associated with septic complications. As one of the most common and severe complications, infection and risk of urosepsis were the reason for recognition that intrapelvic pressure (IPP) is a key of this condition. Closed irrigation systems and a consequent high pressure, low flow and visualization, led PNL to long duration and high risk of developing sepsis. That is why recent developments were focused on flow, decrease of pressure (IPP) by low inflow, high outflow and vacuum cleaner effect.

Virtual forceps, “forceps” made by direction of flow, is a main goal in creating modern, miniaturized PNL instruments. The main advantage of standard, large PNL instruments which is removal of big fragments, and offering speed and efficacy, can now be substituted by high laser energy delivered on the stone, and high outflow with clearance of the dust or fragments created.

Obtaining the precise, planned and desired access to a specific part of the pyelocaliceal system is the first and crucial step for a successful and safe PNL. Efficacy and safety are two ultimate goals, that are present alike in large or complex stones are treated. Sometimes it is not easy to fulfill both criteria, especially in cases of the most complex stones and/or pyelocalyceal anatomy.

Still a challenge

The most complex stone cases remain a challenge for urologists even today despite all the improvements made in endourology and stone treatment. Despite the fact that we can combine multiple tracts, use them separately, one following another (“sandwich therapy”), or at the same time (ECIRS), complex stones and complex anatomy clearly requires the necessity of multiple punctures.

Puncture is the crucial step of PNL, as already said, not just in term of efficacy, but also safety. Puncture is the crucial step of PNL, as already said, not just in term of efficacy, but also safety. Puncture is the crucial step of PNL, as already said, not just in term of efficacy, but also safety. Puncture is the crucial step of PNL, as already said, not just in term of efficacy, but also safety. Puncture is the crucial step of PNL, as already said, not just in term of efficacy, but also safety. Puncture is the crucial step of PNL, as already said, not just in term of efficacy, but also safety. Puncture is the crucial step of PNL, as already said, not just in term of efficacy, but also safety. Puncture is the crucial step of PNL, as already said, not just in term of efficacy, but also safety. Puncture is the crucial step of PNL, as already said, not just in term of efficacy, but also safety. Puncture is the crucial step of PNL, as already said, not just in term of efficacy, but also safety. Puncture is the crucial step of PNL, as already said, not just in term of efficacy, but also safety. Puncture is the crucial step of PNL, as already said, not just in term of efficacy, but also safety. Puncture is the crucial step of PNL, as already said, not just in term of efficacy, but also safety. Puncture is the crucial step of PNL, as already said, not just in term of efficacy, but also safety.

At this time, we can say that treatment of complex stones today becomes an interesting and creative issue. What are the alternatives we have today? Are we going to use standard instruments, bigger than 22 Fr? Or are we going to do Mini-PNL, or are we going to combine standard PNL with flexible nephroscope, of RIRS (ECIRS), or maybe to create multi-Mini-PNL? Selecting the approach should be case-dependent.

Sometimes, even when multiple tracts are created, lithotripsy cannot be completed within one session. Multiple sessions with multiple tracts are reserved for the very large and complex cases. Here are few images when four tracts were created on the right side, in a case of complete bilateral staghorn stones, which were completely removed with two and three sessions of PNL procedures.

In cases where complex anatomy is a bigger issue than stone size, or where stone distribution is associated with complex anatomy, we can try to combine multiple tracts with flexible instruments, and try to approach and extract the stones from calyces that can be entered. Here are the images that present this kind of technique.

It is difficult to advise a urologist on how to direct their intentions concerning treatment selection of complex cases. Sometimes treatment options depend available on instruments and tools, while at times it is a matter of the operator’s personal preference, his/ her skills, experience and results. With so many options offered by guidelines, personal and critical presentation of the possible techniques and results, consulting the patient should also become a standard.

Further improvements

The future of PNL lies in further improvement of its two most important steps.

First step, puncture and tract creation must be precise and gentle, with single-step dilations becoming a gold standard. It could lead to less bleeding, less risks of septic complications, but also better vision during the procedure. The use of pre-operative imaging and selection of the optimal calyceal or calyces, with assessment of the angles between calyces, distribution of stones, makes preparation for the PNL a very creative job!

Better vision takes us to the “second pair of gloves” called safety in the literature we can find proofs that more tracts are one of the reasons for possible septic complications. With smaller sizes instruments, this risk can be decreased. Already mentioned, pressure and flow that nowadays becomes the crucial point of interest in further development of instruments, can take pressure during the PNL procedure to a safely low level, but the level that can maintain space for work and control of the procedure. Vacuum cleaner effect, “virtual forceps”, can also decrease risk of fragments loss to the calyces, which at the end make them residual.

Retrograde intrarenal surgery (RIRS) will continue to develop, and in experienced hands treating bigger stones. But PNL will keep its place in cases of large stones, and in cases with complex anatomy, and also in cases with failed previous less invasive treatments.

Informing the patient about results of the procedure based on the case complexity is possible when we talk about PNL. Concerning RIRS/ECIRS, there are no available nomograms that can determine the complexity of the case. All results are based on the size, or location of the stone – lower pole, pelvic, etc.

This could help us in selecting the most effective procedure, when considering PNL if the complexity of the case can be overwhelmed by multiple tracts. In experienced hand, more tracts do not necessarily bring more risks to the patient.

References:
Reading and interpreting MRI
ESU activities on MRI underlines crucial role of emerging technologies

As urologists we have the foresight to keep up with emerging technologies and cutting-edge research, and rightly so as this benefits our patients and daily practice. Additionally, we also see the growing necessity of being able to read and interpret MRI images as a urological activity.

MRI plays an increasingly important role in the diagnosis of prostate cancer (PCa). It is already the recommended standard for repeat biopsy and will potentially be the recommended standard for first biopsy as well. Thus, the time has come to include MRI reading and interpreting MRI as a urological activity.

Aside from comprehending and making sense of MRI images, it is also crucial that we distinguish good from bad MRI images. Moreover, if we are unaware that there are quality issues with these images at times, the progress of MRI and our own improvement will be stunted. On the other hand, if we are educated about MRI quality, we can discuss, deliberate and work together with radiologists. As a consequence, this will boost the quality standards of MRI, eventually making the adaption of this technology more widespread.

ESU activities on MRI
We need to be more familiar and knowledgeable with this imaging and diagnostic tool and the only way to do that is to learn how to read MRI and draw relevant clinical conclusions. The ideal platform is through the European School of Urology (ESU) courses and Hands-on Training (HOT) sessions of the ESU with the EAU Section of Uro-Technology (ESUT), and the EAU Section of Urological Imaging (ESUI).

Several ESU Courses and HOT sessions on MRI are in the programme of the 33rd Annual EAU Congress (EAU18) here in Copenhagen. The HOT sessions include the ESU/ESUT/ESU Hands-on Training Course in MRI Fusion Biopsy organised by the ESU with the EAU Section of Uro-Technology (ESUT), and the EAU Section of Urological Imaging (ESUI).

This session provides an overview on MRI reading, the basics on techniques and different prostate biopsy approaches. Technical considerations, transrectal and transperineal approaches are examined in the session as well. Participants will have the opportunity to apply learned concepts on different fusion biopsy machines and, at the end of the session, they will further understand advantages, handling of and the limits of MRI ultrasound fusion biopsies.

HOT in prostate MRI reading for urologists at ESU18
Another must-attend HOT session is the ESU/ESUI Hands-on Training Course in Prostate MRI reading for urologists. This session offers an exclusive hands-on experience in prostate MRI interpretation designed to give participants a chance to interpret MRIs and receive individual real-time feedback.

Participants are given warm-up exercises prior to the test cases to familiarise them with the sequences and scoring systems. They are provided with their own laptops during the course for the test cases and will then go through their answers together with esteemed faculty members.

Some ESU courses at EAU18 cover MRI and other imaging modalities such as ESU Course 26 Prostate cancer imaging: When and how to use it, which gives an overview on the currently available imaging tools for PCa, practical information on their use, and a critical assessment of their clinical performance and their limitations. The course includes lectures on prostate MRI, prostate-specific membrane antigen (PSMA) and Choline-PET imaging, staging with computerised tomography (CT) scan, MRI and bone scintigraphy, detection of locally recurrent PCa, and more.

The use of MRI will also be discussed in ESU Course 10 Prostate cancer screening and active surveillance and update on recent imaging techniques such as multiparametric magnetic resonance imaging (mpMRI), Transrectal Ultrasound (TRUS), Histoscanning and nuclear techniques for PCa diagnosis.

Adding to our skills set
A few decades ago, urologists did not know how to read and interpret a CT scan. Today, reading a CT scan is a regular task. We have to be as familiar with MRI as we are with CT scan.

The ESU is on the forefront of making readily available the reading and interpreting MRI to urologists through its courses and HOT sessions. These highly-informative ESU activities also complement the other sessions at the Annual EAU Congress and meetings, ensuring a well-rounded learning experience for participants.

Monday, 19 March
09.30-12.00: HOT 47- ESU/ESUI Hands-on Training Course in Prostate MRI Reading for Urologists
12.00-14.00: ESU Course 65 Prostate biopsy- Tips and Tricks

Dr. V. Kauvarsvanathan (right) guides a participant during HOT MRI reading.

ESU onco-urology series

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8-9 June 2018
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Tips and Tricks
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Specialised urology nurses offer compact, insightful session on bladder cancer care

For the Bladder Cancer Special Interest Group (BC SIG), this year’s International EAUN meeting is an ideal way to introduce its goals to the association’s general membership. With its expertise, knowledge and enthusiasm, the BC SIG aims not only to improve and set standards in bladder cancer (BCa) nursing but also provide a dynamic community to all nurses involved in BCa care.

Currently, the BC SIG consists of five members with expertise in research, professional development and clinical work (operating theatres, ward and outpatient), and all with a special interest in bladder cancer. The members include: Bente Thoft Jensen (DK), Kathryn Chatterton (UK), Heike Pueschel (CH), Line Lydom (DK), and Linda Söderkvist (SE) as EAUN Board representatives. We are at present negotiating group expectations and looking forward to sharing these with our members over the next year. We are extremely excited about our forthcoming plans!

Following an over-subscribed 3rd ESON course in Amsterdam in October 2017 (participants from 18 different countries), we are already planning future courses specifically designed for bladder cancer care. It was a fantastic forum to learn and share ideas from experts and to network with nurses from all over Europe and as far as Japan and Australia.

As we are all aware, practices differ among countries (due to the available range of products, licenses, logistics and costs. At the end of the day we all want due to the available range of products, licenses, logistics and costs. At the end of the day we all want to provide the best for our patients. The BC SIG will allow us as a community to come together, share ideas and learn from each other. We as a nursing community can, through the BC SIG, arrange clinical visits to centres of excellence and where participants can observe best practices.

The BC SIG is in the process of collaborating with other urological nursing associations, not just in Europe but worldwide. We intend to exchange practical ideas, discuss differences, share current practices and potential areas of research. We aim to engage organisations including the Society of Urologic Nurses and Associates (SUANA) and Australia and New Zealand Urological Nursing Society (ANZUNS). One of our goals is for the EAUN website to become a robust source of bladder cancer knowledge, including dynamic content, chat forums, real cases discussion, online webinars, and a listing of masterclasses and courses available in various European centres.

In-depth BCa session

As expected, we offer at this year’s annual meeting a programme that is relevant for all members. Don’t miss the “Evolution and Management of BCG”, which provides a refreshing update and overview on how BCG was discovered, its mechanism of action, effects on the bladder and impact on bladder cancer. Specialised nurses often work autonomously in nurse-led intravesical clinics and this session provides updates on evidence-based practice that not only impacts our practice, but also enable us to provide optimal learning to students and better healthcare for patients.

Secondly, a key aspect in administering BCG is managing the “side effects”. How do we manage side effects? The session will discuss why side effects occur, how to manage these side effects and how to recognise differences between minor and major side effects associated with intravesical BCG administration. We are all aware how troublesome these can be for our patients but with knowledge on how, why and what, we hope participants will gain further confidence in managing these side effects in their clinics.

To conclude the session, we will examine a case study regarding key lessons in BCG that will consolidate the sessions’ learning goals and insights. Moreover, participants should pick up a clear and practical message with regards to the careful administration of BCG that underlines its role as a powerful drug with potential complications, including systemic absorption, BCGitis.

The BC SIG looks forward to welcoming you to this bladder cancer session. Feel free to approach us, share your ideas on how we can take this initiative forward in future EAUN events. We are keen to hear your suggestions regarding learning goals and needs, ideas for future courses, or your need for guidelines that may be lacking.

Finally, the BC SIG will endeavour to support members engaged in bladder cancer care by providing updated information, courses, interesting topics for discussion and collaboration within the EAUN website.

We look forward to seeing you at the Green Area, Room 22 (level 2) at 08.30 Monday 19 March. Join us, ask the experts and be a part of this stimulating BCG session!

Monday 19 March
08.30 – 09.30: 19th International EAUN Meeting, Thematic Session 10
SIG Bladder Cancer: Evolution and management of BCG

Dr. Kees Hendricksen (NL) speaking on substaging of bladder cancer
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Penile Prosthesis Implantation
Monday 19 March 10:00 | Pre-recorded case by Dr Ignacio Moncada (Madrid)

Boston Scientific booth #F15