Activating patients is key to enhanced recovery

By Look Keizer

Prof. James Catto (GB) was one of the closing speakers of the Third Plenary Session at EAU17, speaking with great enthusiasm about the post-cystectomy ERAS approach to patient care. Plenary Session 3 was mainly focused on bladder cancer and featured case discussions, debates and state-of-the-art lectures.

Enhanced Recovery After Surgery, or ERAS, is a pragmatic approach to patient care that can be summarised in three core philosophies: “Do as much as possible outside of the hospital; do as little as possible once the patient is admitted.” Catto summarised. “Cystectomy patients are generally elderly, not in good shape, and smokers. By encouraging pre-habilitation, we prepare patients for surgery and a better recovery; for instance by getting them to walk for one to two hours every day.”

“Following surgery, patients are also activated relatively soon. To reduce discomfort, use of nasogastric tubes and non-essential drainage should be minimised. Even by dressing patients in their regular clothes after a few days, they already feel more empowered and will move around more. Our data shows that ERAS can make massive changes to patient care with no change to the cancer outcome.”

Win-win

Speaking after the session, Catto explained that another key part of this approach has to do with challenging dogmas. “In some cases we do more harm than good. Things like bowel preparation, traditional pain relief techniques, changes in fluid intake: these are big changes for the patient without any clear benefit. I tell my patients that their body will be running a marathon. We want a well-fed and fit body that is tired and weak from fasting going into surgery.”

This approach is certainly not limited to Sheffield: “We might have started with this approach relatively early some 10 years ago, and we’ve perhaps adopted it more systematically. Generally speaking we’re all on the same page, worldwide. There was a randomised trial in Germany five years ago, and in turn we learned lessons from other surgical disciplines. A lot of the early lessons were learned from Swedish colorectal surgeons.”

Aside from having filter patients who are more comfortable due to less invasive recovery, there are advantages for hospitals too. Particularly in the UK, where budgets are limited in the NHS, urologists can do more work with the same resources.

Guidelines on BcA: EAU or NICE?

The realities of costs were also a big theme in the debate about follow-up beyond 12 months for low-grade bladder tumours. Prof. Maximilian Burger (DE) defended the EAU Guidelines’ recommendations for a five-year follow-up period, arguing that cystoscopy doesn’t harm patients, it is the safest way to avoid recurrence, and, crucially, pathologists’ assessments are sometimes wildly divergent and cannot always be trusted blindly.

Mr. Hugh Mostafit (GB) in turn defended the NICE recommendations, stating that they take cost into account from the outset, achieving maximum results with limited resources: “Whereas the EAU Guidelines are about achieving ideal medical results, NICE deals with the realities of the NHS.” Mostafit also pointed to data showing that follow-up may also be useful beyond five years, arguing that the five-year cut-off could be considered arbitrary, being based on retrospective, non-randomised data.

Questions by moderator Prof. Brausi (IT) about specific hypothetical cases (for instance, a heavy smoker) caused both debaters to agree that their respective guidelines were just that: guidelines that leave enough space for urologists to make exceptions at their discretion on a case-by-case basis.

Plenary Session 3: Redefining contemporary bladder cancer care

Expert challenges expert

At Thematic Session 2, ‘Expert Challenges Expert,’ specialist surgeons presented opposing surgical treatments, aiming to provide either a critique or an alternative view of a standard procedure; a format which led to an engaging session covering salvage prostatectomy and the extent of primary lymph node dissection (pLND).

“We have asked the speakers to present a solid and persuasive case, one that will not only challenge but provoke their opponents to re-think their views. This session will therefore serve as a critique of how we view our own surgical techniques,” said Prof. Bob Djoan (AT) who co-chaired the session with Prof. Gunter Janetschek (AT). Prof. Axel Heidenreich (DE) argued for open salvage prostatectomy and discussed his surgical techniques as well as pre-surgical preparation, outcomes and complications. He showed videos of the crucial steps necessary to reduce complications since salvage prostatectomy is known to be more technically demanding than primary prostatectomy.

“Radical salvage prostatectomy (RSP) depends on patient selection, and functional outcome depends on the type of radiation therapy and the surgeon’s expertise,” said Heidenreich as he pointed out that particularly with complications, the surgeon’s expertise plays a crucial role.

“In good hands, RSP is the only second-line local therapy with long-term cancer control,” he added. Prof. Declan Murphy (AU) gave the opposing view and pushed for robotic salvage prostatectomy, saying that “experience is what matters, not the surgical approach.”

“Open salvage radical prostatectomy (RP) is an excellent option if the surgeon is very experienced. But the same applies for robotic salvage prostatectomy,” argued Murphy.

By Joel Vega

By Joel Vega

Emerging treatment strategies and unresolved diagnostic issues in Benign Prostatic Enlargement (BPE) were taken up yesterday during Plenary Session 4 where a mix of state-of-the-art lectures, debates and case discussions provided a comprehensive update to functional urology specialists.

“The aim of this session is to provide not only a comprehensive update on emerging novel therapies for BPE but also to identify areas where issues remain unresolved and examine those that offer innovative approaches,” said EAU Secretary General Prof. Chris Chapple (GB) who co-chaired the meeting with Prof. Piotr Radziszewski (PL).

Whether there is still a role for urodynamics in BPE was the focus of a debate between Prof. Matthias Oelke (DE) and Mr. Nikesh Thiruchelvam (GB) who both gave persuasive arguments for their respective positions; pro (Thiruchelvam) and con (Thiruchelvam).

“Urodynamics investigations are only useful if the investigation changes treatment philosophy and predicts treatment outcome,” said Oelke, who then proceeded to argue for the benefits of the procedure.

Oelke said 40% of patients have residual LUTS and need drug treatment within less than five years after the operation. He also noted in his key messages that up to 50% of patients have detrusor underactivity and those who do not. Moderator Prof. Henry Woo, however, glossed over the vote which triggered amused laughter from the audience.

Following the debate, a vote by show of hands indicated there are still more who do perform urodynamics than those who do not. Moderator Prof. Henry Woo, however, glossed over the vote and declared, tongue-in-cheek: “It’s an even vote”, which triggered amused laughter from the audience.

The session also presented a case discussions that touched on treatment dilemmas in enlarged prostates and LUTS; a state-of-the-art lecture on emerging techniques; a debate on surgical techniques involving the use of electricity, light and water; symptom management following surgery for bladder outlet obstruction; and the American Urological Association (AUA) lecture on unresolved diagnostic issues in LUTS and BPE.

By Joel Vega

Updates on managing Benign Prostatic Enlargement

Emerging treatments challenge standard approaches

By Joel Vega

C. Chapple and P. Radziszewski chair the BPE session

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Providing the opposing view, Thiruchelvam stressed that well-constructed research and evidence is “essential justification for an intervention.”

“This does not exist for urodynamics in treating men with BPE,” he said. He also noted there are adverse events and variability issues with the test. Moreover, he mentioned there are non-invasive options.

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EPU Consensus on key topics
Updates on MRI, testosterone and focal therapies
By Joel Vega

Testosterone therapy, Magnetic Resonance Imaging (MRI) and focal therapy were the topics highlighted in three EAU Consensus statements presented yesterday during Plenary Session 3, with the presenters giving current views on how these procedures can help provide optimal treatment.

Prof. Vincenzo Mirone (IT) gave the overview on testosterone supplements, discussing the evidence in four areas, namely: Erectile dysfunction (ED); libido; Lower Urinary Tract Symptoms (LUTS); prostate cancer; and male fertility.

“Obesity and poor general health are the main causes of late-stage male hypogonadism (OH),” he said. “Weight loss and improved lifestyle are important measures for men with hypogonadism, since these will lead to less depression and, in turn, reduce cardiovascular and reduce overall health risks.” Mirone said. “Testosterone has beneficial effects on sexual functions. Testosterone therapy (TTH) may increase the effect of PD5 inhibitors monotherapy in men with LUTS.”

Regarding LUTS, Mirone said there is consensus that TTH can be given to patients with mild to moderate LUTS. “Further research in men with severe LUTS is needed. Caution should be exercised for men with significant prostatic enlargement and significant residual urine in the bladder,” he added.

On prostate cancer (PCA), the prevailing opinion is that current evidence does not support a link between TTH and a higher risk of developing PCA. “However, sufficiently powered trials with long-term follow-up are needed to reach decisive conclusions,” Mirone said.

On male fertility, men wishing to preserve their fertility should be informed that TTH may cause impairments in fertility, ranging from oligospermia to even azoospermia. “TTH should not be used by hypogonadal (infertile) men who have an active wish to conceive children or undergo infertility treatment,” he said.

Mirone also discussed the risks of TTH such as marmary carcinoma. “Careful monitoring with clinical assessment is warranted during TTH in men with pre-existing cardiovascular disease (CVD).” he said.

Dr. Jochen Walz (FR) gave the overview on MRI, which states that “it is essential that MRI is done by dedicated experts and with high-quality images.” Expertise, training, standardization and quality need to be assured when MRI is to be used in daily practice, according to Walz.

Regarding MRI before first biopsy, Walz reported that there is no consensus that MRI is the gold standard.

EBU: Raising the level of urological education
By Erika de Groot

Standards in training and education for urologists were the core topics of the "Postgraduate Training in Education in European Urology" session held yesterday. The Special Session, chaired by Prof. Arnaudo José Figuereido, (PT) and Prof. Alphonias Papageorgis (GR), was a collaborative session of the European Board of Urology (EBU), the EAU, and national urological organisations.

“What links us all is the education and assessment of urologists for the sake of our patients. The EBU is part of a larger network, the European Union for Medical Specialists (UEMS), linked to the Council of Europe. Furthermore, the EBU is closely involved with the EAU, because we pursue the same purposes in increasing knowledge and optimising the practice of medicine,” said Figuereido.

In his presentation "Standards for teaching and teachers in urology", Mr. Jan Navecky (GB) described what qualities a good medical educator should possess. In terms of values, they should promote quality of patient care and prioritise the needs of patients and learners. They should maintain and update knowledge of subject areas and pedagogy with a complete understanding of their teaching roles and responsibilities.

Furthermore, the educator should be able to motivate and inspire learners, plan and produce effective programmes, and use appropriate technology.

“To have the best care and outcome for patients, they desire the best doctors. To have the best doctors, they should have the best education and training. The best education requires the best teachers,” concluded Navecky.

Regarding the topic of competence-based training and revalidation, Dr. Artur Antoniewicz (PL) stated there is limited evidence to support the inclusion of virtual reality surgical simulation into surgical training programmes.
More attention for renal and bladder cancers

Thematic Session 6 examines immunotherapeutic options

By Loek Keizer

In a busy late-morning thematic session, chaired by Profs. Maria De Santis (GB) and Markus Kuczyk (DE), urologists and oncologists alike presented six state-of-the-art lectures on renal cell and urothelial cancer. Kuczyk noted a shift in focus to these two topics in recent years, following a period in which urological audiences would be more likely to leave the room when the subject was broached.

“Im most European countries, systemic treatment of these two types of cancer is not performed by urologists but oncologists. But as urologists, even if we don’t perform the treatment ourselves, we have to understand how the patient will be treated. At the moment the ‘immunotherapy train’ is leaving the station with regards to bladder cancer. If urologists miss this development, I fear we soon may not be able to follow how our oncologist colleagues treat our patients.”

Kuczyk commended the Annual EAU Congress for providing a good balance of oncological and other topics in its scientific programme. “Urologists have interesting surgical strategies for treatment which are demonstrated here. As Scientific Congress Office Chairman Prof.] Arnulf Stenzl says, we want to further educate urologists and to be practice-changing to a certain extent. But the oncological issues are always emphasised a little, even at a urological congress like this.”

“A multidisciplinary approach is currently followed by all modern cancer centres in Germany and Europe. Contemporary cancer treatment can only be established on the basis of a multidisciplinary approach, and it’s an integral part of all cancer guideline recommendations.”

Changing treatment paradigms

Of the six speakers at Thematic Session 6, Dr. Friedrich-Carl Von Rundstedt (DE) and Dr. Shahrokh Shariat (AT) spoke as urologists, whilst the rest of the speakers were expert oncologists.

Several major trends became apparent throughout the session. “We are now introducing immunotherapy in the first-line treatment of renal cell cancer (RCC),” Luczyk summarised. “In contrast to bladder cancer, we combine immunotherapy with conventional therapeutic options in the form of TKIs. When we subsidise patients according to PD-L1 expression, we see a more favourable response to therapy and a high efficacy in those patients expressing these immune checkpoints.”

Dr. Von Rundstedt raised an interesting point regarding cytoreductive nephrectomy, specifically when patients reveal metastatic disease at first diagnosis. Cytoreductive nephrectomy is an established treatment option in this situation, but at the moment we do not know its optimal timing. In case TKI is applied prior to surgery, there is some concern that these patients have a several-week treatment interruption. They might develop tumour progression in the meantime and decrease overall survival rate. This might be better with immunotherapy but this is an interesting question.”

### Day 3 Award Gallery

**First Video Prize:**
J. Bonsel (Sanneve, Finland)

**Second Video Prize:**
D. Simone (Rome, Italy)

**Third Video Prize:**
F. Porpiglia (Turin, Italy)

**First Prize Best Abstract by a Resident:**
D. Thurtle (Cambridge, United Kingdom)

**Second Prize Best Abstract by a Resident:**
M. Haahr (Odense, Denmark)

**Third Prize Best Abstract by a Resident:**
T. Seisen (Boston, United States of America)

**European Urology President’s Cancer Award:**
T. Arends (Nijmegen, The Netherlands)

**ESUF Best Scholar Award 2017:**
F. Castiglione (Cologno Monzese, Italy)

**YUO Campbell Team Challenge Quiz Winner 2017:**
T. Arends (Nijmegen, The Netherlands)

**ESUI Vision Award 2017**
Dr. M. Abdel-Gawad (Al-Ain, United Arab Emirates)

**Best abstract presented by a Young Academic Urologist in 2017**
H. Borgmann (Mainz, Germany)

**ESUI Vision Award 2017**
F. Sanguedolce (London, United Kingdom)

**European Urology Resident’s Corner Award:**
A.K. Czech (Krakow, Poland)

**Best Paper published by Young Academic Urologist in 2016**
F. Sangadevola (London, United Kingdom)

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- **Current and future biomarkers in castration resistant prostate cancer**
- **Reprolusion**
- **Urogenital tuberculosis - still actual**
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- **Holmium laser**
- **Radical cystectomy**
- **Extracorporeal Shock Wave Lithotripsy (ESWL)**
- The urologist: Primary gatekeeper of men’s health
- **MRI-targeted prostate biopsies?**
- The EAU’s standpoint on meshes
- Emergency uroscopy
- Urological implications of male hypogonadism
- How can microbiome affect the urinary tract?
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- Urothelium: A dynamic structure with excellent communication skills
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Unlocking the potential of social media
In a first feasibility study in five prostate cancer patients with evidence of metastatic lymph node PSMA-radioguided surgery (using 111Indium-labelled PSMA ligands) enabled intraoperative detection of all (even small) suspicious lymph nodes on preoperative PET imaging. Furthermore, in two patients PSMA-radioguided surgery revealed additional lesions of cancer, which were not seen by the known metabolic lymph nodes that were not detected on imaging preoperatively. However, follow-up of these individually treated patients is mandatory to determine the value of this new technique. Several patients that underwent PSMA-radioguided surgery for recurrent prostate cancer experienced a complete biochemical response (postoperative PSA value below <0.2ng/ml) without PSA relapse at further follow-up[5]. Admittedly, it has to be stated that these patients were highly selected (low PSA at recurrence, solitary lesions) and that follow-up is still limited. Due to restricted availability, higher costs and increased radiation exposure of patients as well as medical staff by 111Indium, PSMA ligands were further chemically modified to be labelled with the widely available and cheap 68Ga Ga-ligands that also shows a better radiation profile[6]. In a just recently presented series [6], 111Indium- and 68Ga-based PSMA-radioguided surgery of 56 consecutive patients with recurrent oligometastatic localized prostate cancer on preoperative PSMA PET (PSA median: 1.39-19.0ng/ml) that underwent surgery at our institution from April 2014 to March 2016. Results from intraoperative gamma probe measurements of resected tissue specimens were compared to findings of postoperative histological analysis. Best PSA response without additional treatment was determined within 16 weeks following PSMA-radioguided surgery, and prostate cancer-specific treatment-free survival was evaluated. In total, 242 separate histological specimens were evaluated, and 93 specimens contained metastatic lesions at histological analysis. All lesions (except one) visible on preoperative PSMA PET were also detected during PSMA-radioguided surgery. Intraoperatively, 84 and 144 tissue specimens were correctly identified as cancerous or cancer-free, while six and 13 tissue specimens were false positive and false negative by intraoperative gamma probe measurements. Follow-up information was available for 55 of the 56 patients. Postoperative PSA reduction was 95% or higher in 45 of 55 (85%) patients and 29 of 55 (53%) patients. In 34 patients, 55 (82%) patients, a PSA drop below 0.2ng/ml was observed. 35 of 55 (64%) patients received further prostate cancer-specific treatment after median 202 days after PSMA-radioguided surgery (range: 48 – 454 days), the remaining 20 (35%) patients remained treatment-free at a median follow-up of 99 days (range: 43 – 595 days). In conclusion, comparable to medical targeted therapies, PSMA-radioguided surgery enables “targeted molecular surgery” as it allows intraoperative and specific detection of metastatic prostate cancer tissue. Especially for intraoperative detection of small or atypically located metastatic lymph node PSMA-radioguided surgery might be useful and might therefore be beneficial in regard to tumor control. Greater patient cohorts as well as long-term follow-up are needed to confirm these initial, but encouraging results. Also – as mentioned above – the necessary extent of lymph node dissection during PSMA-radioguided surgery needs to be clarified. Adequate patient selection on the basis of PSMA PET imaging and clinical parameters as well as dedicated and subtle tissue resection, however, will always remain the fundamental basis.

References

In a subset of these patients solitary subcentimeter lymph node metastasises can be observed outside the potential lymph node dissection template (Figure 1). Thus, even with the help of intraoperative frozen section analysis precise detection and resection can be challenging. To overcome the difficulty of exact intraoperative localization of metastatic lymph nodes, we recently described the novel surgical technique of PSMA-radioguided surgery.

For PSMA-radioguided surgery PSMA ligands similar to those used for PET imaging are radioactively labelled with 111In or 68GaTechnetium and are injected intravenously one to two days prior to surgery[4]. Intraoperatively, a γ-probe is used to detect these small unobtrusive and/or atypically located metastatic lymph nodes. After removal, ex vivo measurements with the γ-probe of resected lymph node tissue can immediately confirm the presence or absence of metastatic prostate cancer lesions (Figure 2). However, it is advisable not only to remove the suspicious lymph node on preoperative PET imaging, since further microscopic prostate cancer deposits that are too small to be identified by PET might still be present. The extent of dissection in these salvage cases, on the other hand, is still a matter of debate.

Figure 1: PSMA PET shows a suspicious para-aortic lymph node
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phenotypes and combined the survival was less than IAC was validated by a panel of blinded pathological biopsies as of July 2016. Figure 2 shows two histologic treatment underwent CT-guided core biopsies of Witte. CRPC patients who had progressed after and Oregon Health Sciences University and the lead The SU2C “West Coast Dream Team” consisted of UCSF, and in particular ADR1C3, are the backdoor pathway in which DHEA is biomarker and have preliminarily measured AKR1C3. As such, we see levels of AKR1C3 as a potential CRPC.13 Recently, we validated this finding of ROR-γ is involved in the expression of multiple molecular drives androgen receptor expression.10,11 Recently, we validated this finding of ROR-γ was amplifies in 6% of patients.13 In the literature, it has been reported that the retinoic orphan receptor expression levels are increased in CRPC.10,11 Recently, we validated this finding of ROR-γ was amplifies in 6% of patients.13. However, in a more advanced CRPC cohort of patients from the SUO annual meeting held in San Antonio. On current and future biomarkers in CRPC 6

References
1. Hussain M et al. Absolute prostate-specific antigen value after androgen deprivation is a strong independent predictor of survival in men metastatic prostate cancer: data from Southwest Oncology Group Trial 9616. [Epub ahead of print]
ReproUnion is the brand name for a large and inter-disciplinary collaboration between specialties within all aspect of reproductive medicine, including urological andrology, situated in the Greater Copenhagen area.

It is a unique public and private partnership where 12 international partners, including universities and hospitals, together with Ferring Pharmaceuticals A/S, work across different organisational boundaries. Because of its bi-national nature (Sweden and Denmark), the program was financed by European Union (EU) inter-regional funds within the Horizon 2020 framework program.

The main challenge is not only to foster world-class research in the individual participating units but also to create synergies between the many different competencies in the region. The goal is to deliver the best and most holistic treatment and service to Danish and Swedish infertile couples and individuals.

Access to a high volume of treatments and national registries are key factors

With the access to more than 9,000 IVF treatment cycles annually in ReproUnion, the total volume of patients is very attractive for funding from a clinical research perspective. The high-volume gives an opportunity to run several large clinical trials within the three-year program period.

Access to large national registries with clinical data and access to patients from more than 200,000 people, who have had an IVF treatment and fertility treatments and procedures gives a unique opportunity for epidemiologists and clinicians to conduct investigations with outcome data from these registries in a scale not seen anywhere else. When databases from the two countries are combined, access to follow-up data from several million individuals can be achieved.

In ReproUnion this asset is used to make a follow-up on more than 200,000 women who have had an IVF treatment, to study the relation between infertility and dis morbidity later in life and several other purposes.

ReproUnion was funded with a significant amount of money

ReproUnion has a budget of more than 15.4 million euros (2019-2028). The EU supports the program with 59% of its funds, whereas the rest is covered between public and private contributions. This significant amount of money has allowed the program to set up PhD, D. or post-doctoral research projects within many different areas of reproductive medicine including urological andrology.

ReproUnion focuses on the next generation

The program has the aim to efficiently educate the next generation of both clinicians and scientists within all disciplines of reproductive medicine. This is done by running practical and theoretical training courses for post-graduate students, research seminars, presentation sessions and conferences, where domestic and international attendees meet.

Several international scientists have been attracted to the region to spend time to participate in research activities on the program, and ReproUnion have provided funds for new research fellowships aimed for young members of EAU expanding the international outreach of the program.

Free Fertility Counseling fights the low birth rate

Free and open fertility counseling is provided, where young men or women either alone or as couples can get a personal clinical evaluation of their current fertilities and capacity to take action in their family planning. A declining fertility rate is present in most developed countries. In Scandinavia, the rate is approximately 88 children per female and has been declining the last 50 years.

This development poses a major threat to the demographic development where more than 50% of the population will be older than 60 years in 2050. The ReproUnion mission addresses this threat through a targeted public campaign to generate and expand the general awareness of these issues especially among the youngest part of the population.

Inter-regional EU funds are ready to support research

Inter-regional funds from the EU have not in the past been targeted towards traditional research. These funds are not like traditional sources that typically are given to individual projects or groups of scientist. The overall purpose of inter-regional programs like Interreg V A is to support regional growth, job creation and wealth.

Global development trends may change the health care environment

European urology faces great challenges in the future. Demographic changes, including the expected increase in life expectancy, will increase the economical health burden in Europe based on rise in the number of urological cancers as well as benign urological diseases associated with advancing age.

Infertility and low birth rates continue to be major challenges for all developed countries. Economic pressure on public and private health care providers will call for innovations and new ways to deliver health care to an aging population, where individuals are brought up to expect more individualised treatment, empowerment and active involvement in treatment decisions.

Globalisation together with digitalisation will open new opportunities but also demands. Patients will ask for advice and treatment irrespective of geographical location. Healthcare will in the future be delivered through new tools independent on distance.

These new challenges can only be met through a central and efficient role of the entire urological community. The EAU must and will fill this position.

EUA has done a great job in the past

The EAU has done a great job in the past. The organisation has supported ground-breaking research and development through grants and fellowships. Member groups have developed evidence-based international guidelines, that clearly communicate and display updated knowledge about diseases and their treatment. The international scientific community has formed networks of scientists to facilitate knowledge-sharing. The EAU runs ambitious education programs where young urologists learn state-of-the-art diagnosis and treatment mentored by older colleagues. Strong ties exist between the many national urology societies and the EAU, all striving to have the highest political impact as possible.

EUA will meet the future well-prepared

Organisations that are based on memberships and sponsors must continuously adapt to changes in the environment. If an organisation is perceived too remote and out of touch with member needs, it will lose influence and impact in the long run. EUA will develop new paradigms based on previous achievements.

The new paradigms: more cross-disciplinarity; digitalisation requires new skills; global rather than just external network are key to future success; efficiency in public-private partnerships can create new opportunities; fast documentation; implementation of new technologies to improve quality without increasing health care costs; and active patient involvement and empowerment that will change physicians role in society.

Many societies compete for the same EU funds, but the EAU can gain a competitive advantage if new and innovative ways to collaborate across borders and boundaries are explored...”

EUA has set the priorities

The European Union has already set the agenda for the future European health care. Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly 80 billion of euros funding available over seven years in addition to the private investment that this money will attract. This program will soon come to its end, but it will be followed by a new research program enrolled in the total EU budget that needs to be passed in 2018 or 2019.

European Medical Research Council, which sets the health care priorities for the community for 2018-2028, claims that technology continues to be develop at an accelerating pace alongside societal attitudes marked by ever greater demands. The council states that smart solutions are needed to overcome these challenges. The EU recommends transnational collaboration with a focus on the use of EU funds for research, where Member States cannot solve problems alone and where collaboration is needed. Programs need to focus on inter-national collaboration with researchers outside Europe, and focus must be on mobility of both young and senior researchers.

Healthy aging, non-communicable diseases and personalised medicine are among the five vertical areas of top priority for EU and of the most interest for the EAU. Beside these topics, the council stresses the future importance of “big data”. Future health research increasingly rely on integration of large datasets to provide the evidence base for realisation of personalised medicine and future health policies.

Such datasets range from high-throughput “omics” analyses of human specimens to electronic health records, personal monitoring devices, population and panel registries, and data on environmental exposure, nutrition, lifestyle and socioeconomic status.

Great opportunities for EAU

EUA does not support individual specialities like urology, but requires that future society challenges are addressed in any program seeking central support. Interest is currently is crucial and links exist between all themes. In public health, the programs need to focus on holistic integration with other research areas.

This political agenda holds great opportunities for the EAU if it plays a central role in the future implementation of European healthcare politics. Early diagnosis and efficient treatment of common urological diseases like prostate cancer are dependent on genetic screening and development of sensitive and specific biomarkers for guidance and monitoring. Urological andrology are important elements fighting infertility and low-birth rates to counter the unfortunate demographic trend.

The ReproUnion model may show a way

Many societies compete for the same EU funds, but the EAU can gain a competitive advantage if new and innovative ways to collaborate across borders and boundaries are explored and offered to members. The key to success for any program lies its implementation. ReproUnion represents such an innovative organisational design that focuses on the most important issues for a successful implementation. ReproUnion experiences can easily be translated to handle complex inter-disciplinary and multinational research initiatives for EAU.

The future starts today

The ReproUnion model has shown its value and is worthwhile for urology actors to pursue their future endeavors for funding. ReproUnion is proud to be affiliated with the EAU and is ready to share ambitions and efforts with all EAU members.

Monday 27 March
13.15-14.15: Thematic Session 12,
Male hypogonadism – What role for Testolente Replacement Therapy (TRT)?
New insights and recommendations on decreasing the risk of progression in bladder cancer

Clinical trials have shown that hexaminolevulinate (HAL) fluorescence cystoscopy reduces the risk of bladder tumours compared with standard white-light cystoscopy (WLC), resulting in more efficacious treatment. A meta-analysis of raw data had previously revealed an increase in the detection rate of carcinoma in situ (CIS) by 42%, and there were almost 25% patients with at least one additional Ta/T1 tumour seen with BL, only (p < 0.001). Despite improved detectability of bladder cancer with WLC, literature has not reported a beneficial impact on patient survival or the prevention of progression (NMIBC). However, progression is one of the most important clinical outcomes in non-muscle-invasive bladder cancer as it indicates a worsening of disease. A working group compared the results of HAU- vs. white-light-guided TURB and found out that rate of progression was significantly lower in patients in whom a TURB was performed with WLC vs. HAL alone. This recently published meta-analysis by Galis et al. included NMIBC studies published between 2000 and 2016 and reporting on progression after HAL- and WLC-guided TURB. Consequently, they identified via PubMed search and a manual search of publications in journals not listed in PubMed. The selection excluded non-English articles, non-original articles (i.e. review articles with or without systematic review or meta-analysis), editorials or case reports, studies that involved HAL re-reviews the current body of evidence for the first bladder cancer resection in the on the impact of hexaminolevulinate- versus white-light guided transurethral bladder tumour resection on progression of non-muscle-invasive bladder cancer. In order to evaluate references and their levels of evidence, a Medline search had been conducted covering diagnosis, treatment and follow-up of bladder cancer between 2013 and 2016.

The new French Guidelines recommend blue-light cystoscopy for the first bladder cancer resection in the majority of patients and for consecutive TURBs in many patients. This facilitates the most careful grading and, grading, which is crucial for the follow-up management of the patient. In contrast to the former version of the Guidelines, the updated Guidelines includes the situations in which diagnosis with WLC can reduce the risk of recurrences. A cost-effectiveness study applied to the French system revealed a QALY gain (an economic indicator aiming to estimate the value of life) for the use of fluorescence-guided TURB with HAL starting with the first TURB of any NMIBC. According to Morgan Rouprêt, Professor of Urology at the Pitié-Salpêtrière Hospital, University Paris, and one of the authors of the Guidelines, “the strong level of evidence associated with the newest data incorporated to the European Guidelines for the use of blue light cystoscopy should result in a change of the urological care for the management of bladder cancer in France.”

Diagnoses with WLC was also associated with decreased risk of recurrence of non-muscle-invasive bladder cancer versus WLC in another recently published meta-analysis. This meta-analysis, stratified analyses by use of 5-ALA and HAL, and the use of 5-ALA and HAL. Similar findings were made when looking at short-term, intermediate-term, and long-term disease-free survival. Evidence on short-term and long-term recurrence was statistically significant in trials that used HAL, and were not statistically significant in trials that used 5-ALA.

Diagnostic with blue-light cystoscopy for the first resection Today, BLC is mentioned and recommended in the majority of Guidelines (Figure 2), including the recently updated American Urological Association (AUA), Association Francaise d’Urologie (AFU) and Deutsche Gesellschaft für Urologie (DGGU) Guidelines from 2016.

On November 29th, 2016, during the national meeting of the Association of French Urologists (AFU) in Paris, the new 2016 French National Guidelines for the Management of Bladder Cancer were presented. The purpose of the Comité de Cancérologie of the AFU (CCAFU) was to propose updated French Guidelines for non-muscle-invasive and muscle-invasive (MIBC) bladder cancers. In order to evaluate references and their levels of evidence, a Medline search had been conducted covering diagnosis, treatment and follow-up of bladder cancer between 2013 and 2016.

The new French Guidelines recommend blue-light cystoscopy for the first bladder cancer resection in the majority of patients and for consecutive TURBs in many patients. This facilitates the most careful grading, which is crucial for the follow-up management of the patient. In contrast to the former version of the Guidelines, the updated Guidelines includes the situations in which diagnosis with WLC can reduce the risk of recurrences. A cost-effectiveness study applied to the French system revealed a QALY gain (an economic indicator aiming to estimate the value of life) for the use of fluorescence-guided TURB with HAL starting with the first TURB of any NMIBC. According to Morgan Rouprêt, Professor of Urology at the Pitié-Salpêtrière Hospital, University Paris, and one of the authors of the Guidelines, “the strong level of evidence associated with the newest data incorporated to the European Guidelines for the use of blue light cystoscopy should result in a change of the urological care for the management of bladder cancer in France.”

EUT Congress News

Prescribing Information Hexvix® (hexaminolevulinate): Presentation: Hexvix 85mg, powder and solvent for solution for intravesical use. Pack of one 85mg, glass vial containing 85mg of hexaminolevulinate hydrochloride as a powder and one 50mL polypropylene or glass vial containing solvent. After reconstitution in 50mL of solvent, 1mL of the solution contains 1mg hexaminolevulinate which corresponds to an 8mmol/L solution.

Effects on short-term and long-term recurrence were evaluated using the new binary recurrences were treated timely and adequately.” Professor Galis from the Department of Urology, University of Zürich, Switzerland, summarised the result of the review.

References

DOI: 10.1016/j.eururo.2015.05.030

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Electronic Journals

UK/Eurolala, February 2017

EUT Congress News

Monday, 21 March 2017
Bipolar Enucleation Electrode
for Enucleation of the Prostate

We name you 5 of many advantages:
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• Discounts on meetings and workshops
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• Boost your career with educational programmes, scholarships and free accredited courses
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Overactive bladder:
onabotulinumtoxinA as treatment (2 CME credits)

Overactive bladder:
mechanisms & management (1 CME credit)

Non-Muscle Invasive Bladder Cancer (CME 2 credits)

Metastatic Prostate Cancer (4 CME credits)

Risk profile-oriented management of BPE/LUTS

Become an EAU member at EAU17!
We welcome you at EAU Booth G50!
Kidney tuberculosis (KTB) is defined as an infectious inflammation of the kidney parenchyma, caused by Mtb or M. bovis. There are four stages to be considered:

Stage 1: KTB of kidney parenchyma (non-destructive form, KTB-1)
Stage 2: Kidney tract tuberculosis (KTB) includes TB of pelvis, ureters, bladder, and urethra. UTTB appears as an oedema, the next stages are infiltration, ulceration and fibrosis. UTTB is always secondary to KTB.

Table 1: WHO reports on TB statistics (1-5).

<table>
<thead>
<tr>
<th>Year</th>
<th>Patients diagnosed with TB (millions)</th>
<th>Patients died from TB (millions)</th>
<th>HIV-positive patients died from TB (thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>8.6</td>
<td>1.2</td>
<td>320</td>
</tr>
<tr>
<td>2013</td>
<td>9.0</td>
<td>1.3</td>
<td>360</td>
</tr>
<tr>
<td>2014</td>
<td>9.0</td>
<td>1.4</td>
<td>420</td>
</tr>
</tbody>
</table>

Thus, prostate biopsy confirmed the diagnosis of “prostate TB” in 32 patients (36.4%), 23 by histology, six by culture and five by PCR (among them, two also had positive culture). A recent study showed that chronic prostate inflammation accelerates prostate cancer progression, in the context of diverse malignancies and bases transluminal-differential acceleration, and accelerates initialization of prostate cancer originating from basal cells. TB inflammation is chronic, and may provoke development of cancer.

Case report
A 22-years-old patient came from pulmonary and prostate TB complained seven years later of dysuria. PSA was 15 ng/ml. Prostate biopsy revealed prostate cancer and the patient underwent prostatectomy. Large prostate cavities with calcified cecalization were found (Figure 2). Active infection was not found.

In patients with a history of TB and elevated PSA levels, prostate biopsy is indicated as in other circumstances to diagnose or rule out prostate cancer. While pulmonary TB patients mostly have a low body mass index, 14% of patients with prostate TB had metabolic syndrome and obesity (Figure 2).

Challenges in UGTB
UGTB is a multifaceted disease and one standard approach is not suitable. To optimize the management of UGTB, it is commonly accepted classification is needed and the different clinical characteristics of the various forms of UGTB have to be carefully considered. In all other infections, attempts should be made to cure UGTB with antituberculous therapy. In case of advanced stages surgery may be required as well.

Physicians should bear in mind that in addition to functional deterioration of the organs involved, such as renal insufficiency, bladder shrinkage, and infertility, TB itself may also cause impaired sexual function which might be improved by adequate anti-TB therapy. However, patients with pulmonary or UGTB must be carefully informed about the risk of infecting their partners during sexual activity.

References

WHO. Global tuberculosis report 2005. wshhln/pan rebels/ global reports /


J. Vost Lee. Diagnosis and Treatment of Extrapulmonary Tuberculosis Tuberc Respi Dis. 2010;18:45

Monday, 27 March 2017
Multiparametric MRI (mpMRI) of the prostate based on prostate imaging reporting and data system version 2 (PI-RADS v2) is widely used in clinical practice in many centers in Europe and far beyond.

These guidelines aim to promote global standardization, to diminish variation in image acquisition, interpretation and reporting of prostate mpMRI and to improve detection and localization of clinically significant prostate cancer in treatment naïve patients. It does however, not address detection and classification of prostate cancer after radical prostatectomy or radiotherapy, imaging in patients under active surveillance or evaluation of other parts of the body.

mpMRI can be performed on any clinical scanner (1.5 and 3T); however prostate MRI on a 3T MRI without mpMRI can be performed on any clinical scanner (1.5 T); however prostate MRI on a 3T MRI without mpMRI can be performed on any clinical scanner (1.5 T). Anti-peristaltic agents are recommended to reduce bowel motion artifacts.

PI-RADS v2 standardises and improves communication between radiologists and urologists to detect or exclude clinically significant prostate cancer (Gleason ≥ 7, volume ≥ 0.5 ml, extraprostatic extension or seminal vesicle involvement) with a high likelihood. Findings on mpMRI are reported on a five-point scale based on a combination of imaging features, namely T2-weighted (T2w) MRI, DW-MRI and dynamic contrast-enhanced MRI (DCE-MRI) for each particular lesion addressing the likelihood of the presence or absence of clinically significant prostate cancer.

Most prostate cancers (>75%) are located in the peripheral zone of the prostate. DW-MRI is the dominant sequence for prostate cancer detection in the peripheral zone. DW-MRI shows the Brownian motion in the extraprostatic spacious area and provides information on the cell density of the underlying lesion. This is therefore a very sensitive and specific method to detect prostate cancer mainly in the peripheral zone.

"...mpMRI based on PI-RADS v2 is an excellent tool to detect or exclude clinically significant prostate cancer with a high likelihood."

A typical prostate cancer in the peripheral zone is detected as a focal lesion with impeded diffusion, meaning a high signal intensity on the high b-value image (b-value of 2000 sec/cm²) and a hypointense lesion on the corresponding Apparent Diffusion Coefficient (ADC) map. On T2w images these tumors are hypointense and show focal enhancement on DCE-MRI (PI-RADS v2) is excellent in detecting significant prostate cancer in the peripheral zone with a detection rate of more than 90%.

Differential diagnoses

Benign prostatic hyperplasia (BPH) shows typically hypo- or hypointense well-delineated nodules with a hypointense rim in the transition zone leading to enlargement of the prostate. As a consequence, the peripheral zone can become smaller or nodules can protrude into the peripheral zone mimicking prostate cancer if image interpretation does not take into account T2w sequences and findings are only based on functional techniques. Also BPH nodules can show impeded diffusion on DW-MRI and focal enhancement on DCE-MRI. In these cases the correct diagnosis can only be made based on T2w sequences.

Prostatitis/inflammation has a high prevalence around the world, is often clinically silent and can also lead to an elevated PSA. In contrast to cancer lesions, prostatitis is often a more diffuse process and can present as a hypointense lesion on T2w with slightly impeded diffusion, however, to a lesser extent than tumors. ADC measurement can be helpful to differentiate tumor from inflammation with the latter showing a higher ADC value compared to prostate cancer.

Prostatitis often shows diffuse enhancement. Granulomatous prostatitis, however, also shows focal enhancement and impeded diffusion such as significant prostate cancer and based on imaging these entities can’t be separated. In these cases knowledge of previous BSO instillation can help to suggest this potential differential diagnosis.

Normal findings such as the normal central zone presenting as a hypointense lesion in the posterior base of the prostate should not be interpreted as cancer. Furthermore, the normal ductus deferrens might mimic seminal vesicle infiltration for an unexperienced reader.

"Indication to perform mpMRI is often a negative previous biopsy; however, the use of mpMRI before biopsy is increasing in many institutions."

Additional information based on mpMRI

Several studies have shown an inverse relationship between tumor aggressiveness (Gleason score) and ADC value. This might be helpful to determine the index lesion, to perform targeted biopsy and to apply this information in the evaluation of patients under active surveillance due to a low grade prostate cancer. However, for the time being, the Gleason score based on ADC cannot be determined for each individual patient.

In conclusion, mpMRI based on PI-RADS v2 is an excellent tool to detect or exclude clinically significant prostate cancer with a high likelihood. However, even excellent image quality, reader experience and close collaboration between radiologists and urologists are the prerequisite for optimal patient management.

Suggested literature


Almost half a century has passed since the world’s first laser stone procedure in 1968. After the introduction of the first commercial laser lithotripter in the 1980s, urological applications in the literature quickly overshadowed the use of lithotripsy in all other medical fields, such as gastroenterology, general surgery or ENT, to treat, for example, biliary, pancreatic, or salivary stones.

Currently, laser lithotripsy is established primarily as a urological field, with By-99% of the stone-removal published in the last 10 years authored by urology-affiliated investigators. In particular, the holmium:yttrium-aluminum-garnet ( holmium:YAG) laser is extremely useful and has a wide range of applications in most urological fields, such as lithotripsy, coagulation, incision, resection, enucleation or vaporization procedures. This versatility, supported by an excellent safety profile in any endourological setting, makes holmium laser one of the favorite tools of any urologist. The optimal holmium laser lithotripsy settings and the most appropriate laser fibers to achieve the best lithotripsy performance is an ongoing discussion and are still being refined. 4 A quick review how this holmium laser technology evolved and its main accomplishments are summarized here.

The main, and usually the only, adjustable parameters of the first holmium laser lithotripters were pulse energy and pulse frequency. The total power output results from the product of these two parameters: Total Power (W) = Pulse energy (J) × Pulse frequency (Hz). By adjusting these parameters, the urologist decides the energy intensity that is delivered at the tip of the laser fiber to ablate the urinary calculus. As expected, increases in total power, i.e. in pulse energy or pulse frequency were usually accompanied by an increase in ablation volume but by no means in a linear fashion as shown above.

But, as with any new technology, some problems and limitations quickly became apparent. First, laser lithotripsy performance in short-pulse, similar to ballistic lithotripsy, although to a lesser extent. Retropulsion is known to reduce lithotripsy efficacy, increase operating time and, sometimes, making ureteral calculus inaccessible by pushing them into the renal pelvis. 5 And the higher the pulse energy, the greater the chance for back-effect. 6 Second, pulsed laser fibers suffer a burn-back effect, especially the fiber tip, that wears off faster, and whose damages are more intense at high pulse energies. 7 And, third, laser lithotripsy produces stone fragments, whose size and number can increase the operating time, requiring further laser lithotripsy and/or the use of an expensive stone-removal device. Some authors advocate that lowering pulse energy reduces fragment size. 8 Nevertheless, these findings are not always confirmed. Low-powered (usually up to 15 W maximum), with low-pulse energies (up to 1.5 J), having limited success in fragmentation, and a fixed pulse length/duration (300–350 μs).

Some manufacturers tried to overcome this by producing more powerful lithotripters (up to 100 W), capable of higher pulse energies (sometimes up to 3.5 J), as well as producing higher frequencies (up to 50 Hz). However, the retropulsion and laser fiber burn-back issues shown by the first lithotripters continued and were even exacerbated in these lithotripters with the use of higher pulse energies. To prevent these persisting drawbacks, higher pulse frequencies were advocated as the way to go. Lower pulse energies could therefore be used, and still achieve higher power outputs (e.g. 0.5 × 50 Hz = 30 W), without damaging the laser fibers considerably, reducing retropulsion to some extent, and also giving the impression of lowering the number of large stone fragments.

The increase in pulse frequency and the consequent increase in total power were also expected to increase ablation volume. However, several studies did not measure any significant rise in ablation volume with an increase in repetition or resurgence frequency. 9 Study of the total power was kept constant, low frequency using high-pulse energy settings showed a statistically significant favorable difference over high frequency using low-pulse energy settings. Besides showing a direct proportional increase in ablation volume as pulse energy rises, that study also showed that at the same power levels, low frequency using high-pulse energy settings were up to six times more ablation than high frequency using low-pulse settings. Even very high power settings using high frequency were surpassed by significantly lower total power settings using higher pulse energies, highlighting the pulse energy as the determinative factor in ablation volume, with pulse frequency and total power playing a secondary role. 7

Technological upgrade
A new generation of lithotripters appeared and regardless of their power capabilities, until then, holmium laser lithotripters had only two parameters controllable by the urologist: the time to change pulse length. Instead of a fixed pulse length or pulse duration (300–350 μs), therefor known as short pulse, the lithotripters could now choose a different and longer pulse length, subsequently known as long pulse (800–2250 μs). Although all lithotripter settings settings remain the same with no pulse frequency setting and the same pulse energy, and therefore the same power level, in short-pulse lithotripsy the energy delivered by a laser fiber is not constant during a sequence of time, while in long-pulse lithotripsy, that same amount of energy is distributed over a longer period of time. In comparison to short-pulse lithotripsy, long-pulse lithotripsy is a bit less ablative, but it doesn’t produce so much retropulsion, fiber burn-back is significantly reduced with less cladding degradation as well as less fiber tip occupation, 10 and the size of resulting stone fragments also seems to be smaller.

From now on, instead of lowering the pulse energy to increase periods of time, i.e. with increasing pulse frequency, the lithotripters are now capable of delivering a great amount of energy and the power setting for short-pulse lithotripsy is similar to the old holmium lasers. Although many lithotrippers setting for long-pulse lithotripsy, each burst is made of several individual pulses, which are fired in a very rapid succession. 11 Each of these individual pulses, which are fired in a very rapid succession (few milliseconds from one another), each burst, the first pulse is the most powerful one, followed by a less powerful, and finally by the least powerful one. Within each second of laser emission, there may be several of these bursts. Initial tests showed burst laser lithotripsy to be more ablative than conventional laser lithotripsy at similar power levels. 12 Nevertheless, other aspects such as reducing the retropulsing stone fragment, burst still be evaluated with this new lithotripsy mode.

One of the latest innovations is an entirely new form of lithotripsy known as "burst laser lithotripsy". In conventional laser lithotripsy each pulse is exactly the same as its preceding or succeeding pulse, with the same pulse energy, the same pulse length and also the same time interval between pulses. However, in burst lithotripsy, each burst is made of several individual pulses, which are fired in a very rapid succession (few milliseconds from one another), each pulse having the same amount of energy. However, that amount of energy is delivered over an increasing periods of time, i.e. with decreasing pulse length. For example, in case of a 3-pulse burst, the first pulse is the most powerful, succeeded by a less powerful, and finally by the least powerful. One within each second of laser emission, there may be several of these bursts. Initial tests showed burst laser lithotripsy to be more ablative than conventional laser lithotripsy at similar power levels. 13 Nevertheless, other aspects such as reducing the retropulsing stone fragment, burst still be evaluated with this new lithotripsy mode.

Effect of outcomes
In conclusion, as soon as the first holmium laser lithotripters appeared on the market, difficulties and limitations pertaining to that technology were identified. Developments and improvements in the technology followed, improving efficacy and reducing some of the associated difficulties, while others remained to be addressed.

The foreseeable future could well include a very high-frequency ratting-pulse-length burst laser lithotripter. But regardless of any upcoming technological innovation, the surgical technique and approach of each individual urologist to a urinary stone still weights on the outcome of the procedure. An ancient scolded in prudent hands succeeds better than the best laser scalpel in ineptienced ones...
Radical cystectomy (RC) continues to be a procedure of choice for muscle invasive bladder cancer. Although improvements in surgical technique, as well as in pre- and postoperative care for patients undergoing this type of surgery that have been introduced over the last three decades, have limited the mortality and morbidity rates, RC is still associated with significant risk of complications.

Morbidity related to RC and urinary diversion occurs in up to 40% of all patients1,2. Intestinal injury rate which has decreased in the last three decades and in contemporary series accounts for up to 10% of all complications in individuals operated for muscle invasive bladder cancer, has potentially grave consequences if not recognised early3.

Rectal injury
Inadvertent rectal injury from radical cystectomy most commonly occurs during one of two parts of the dissection i.e. the ureteral dissection and the mobilisation of the rectum. The latter scenario is more frequent and results from improper entrance into the plane or an obliteration of operandum factors such as fibrosis around the anterior vaginal cuff and rectum in women who previously undergone hysterectomy.

As unrecongised colonic injury can lead to a significant potential sequelea with intra-abdominal sepsis and death, surgeons should be aware that any rectal injuries are recognised intraperitoneally so that the rectifying steps can be taken promptly and serious postoperative consequences can be avoind. Therefore, after bladder removal the rectum needs to be carefully inspected. Diligent intraoperative inspection of the anterior and later rectal walls is of utmost importance and if this is inconclusive we recommend insuffling the rectum with air while the pelvis is filled with fluid. This enables the surgeon to identify the site of injury which is indicated by appearing air bubbles.

In case of intestinal tear adequate repair must be performed. This may involve either primary closure or colostomy formation. Several factors including the ones that may significantly impair healing in the immediate postoperative period were identified by: adequate decompression of the lacerated bowel and establishment of sufficient pelvic drainage. It is our practice to dilate the anal sphincter manually while performing this step. An interrupted inverting suture is used to close the mucosa and attention is paid to invert mucosal edges into the bowel lumen. The repair with a greater omental apron particularly if the re-convalescence of the patient is uneventful and an adequate decompression of the lacerated bowel is obtained.

Postoperative bowel leak
Postoperative bowel leak should be suspected in patients who present with fever, wound infection and leukocytosis on the fifth to seventh postoperative day or in individuals delayed return of bowel function, which is normally associated with the time when the sigmoid to knuckle, and we open the antimesenteric border of the loop. The bowel is returned to the skin after the abdominal wound is closed and dressed.

In any case of rectal full-thickness injury, we recommend adequate decompression of the lacerated bowel and establishment of sufficient pelvic drainage. It is important to dilate the anal sphincter initially immediately after the bowel repair and to place a rectal tube at the end of the surgery while a patient is still under anaesthesia. This approach decreases intraintestinal pressure within the affected segment of the bowel and on the rectal suture line which if not reduced can result in repair dehiscence with further serious complications. If following rectal injury we recommend to drain the pelvic in an effort to minimise the risk of pelvic abscess formation. We prefer to place a pelvic drain via a track through a direct incision on the pericervum if urethrothry has not been performed, whereas in case of retropublic drainage should be performed. In case of primary surgery the pelvic drainage is direct and dependent. Aggressive postoperative nutritional in all patients with colorectal repair in the form of parenteral parenteral nutrition is critical, as the period of starvation is prolonged and individuals are in acute catabolic state.

References
In major congresses in recent years, the importance of extracorporeal shock wave lithotripsy (ESWL) as a valuable treatment modality in active stone management has been relentlessly challenged.

This challenge is based mainly on perceptions and misconceptions. Treatment results with ESWL are supposedly disappointing both in terms of re-treatment rates and stone-free rates (SFRs). Apart from that, and in contrast to endourological techniques, ESWL is believed to require few skills and hence is underestimated as a "serious" treatment modality. As a consequence training in and proper performance of ESWL are often neglected creating a vicious circle.

The EAU Guidelines on lithotripsy are the result of a meticulous analysis of the existing literature on stone treatment. These Guidelines specifically state that success with ESWL depends on the efficacy of the lithotripter and the following factors: size, location and composition (hardness) of the stones, patient’s habits, the coupling area and the proper performance of the procedure. Results are operator-dependent and better results are obtained by experienced clinicians.

According to these Guidelines, ESWL remains a recommendable treatment choice for renal stones less than 20 mm in size. While with increasing stone size SFRs both for ESWL and retrograde intrarenal surgery (RIRS) decrease, SFRs for percutaneous nephrolithotomy (PNL) remain largely unaffected. Due to the decreasing SFRs and the need for repeat sessions with increasing stone size, neither RIRS nor ESWL are recommended as first-line treatment for stones larger than 20 mm.

For stones 20-22 mm in the lower pole, ESWL is not recommended in the presence of unfavorable anatomical factors. The problem is that sometimes even in the lower pole stones rarely poses a problem. SFRs may be affected by poor clearance of the fragments from the gravity-dependent lower pole. In the absence of unfavorable factors both ESWL and endourological techniques are equally recommended in this subgroup.

In the treatment of ureteral stones, overall SFRs after URS or ESWL are relatively comparable. Larger stones (>20 mm) achieve higher and earlier SFRs with URS, but URS is associated with higher complication rates and a longer hospital stay. For ureteral stones smaller than 10 mm both ESWL, and URS are recommended as first choice regardless of their location in the ureter.

Least invasive treatment

Still, according to the Guidelines, ESWL remains the least invasive treatment modality in children. Apart from the important observation that children pass fragments more easily than adults, the indications for ESWL in children are the same as in adults.

"Emergency" ESWL within a short interval after a first episode of colic offers improved fragmentation, a shorter time to achieve complete stone clearance, an increase of SFR and a reduced need for repeat ESWL sessions and a treatment of the renal colic in itself.

Key factors for success with ESWL are the operator and the lithotripter. For the longest time ESWL has been considered a boring and tedious procedure with little or no input from the clinician operating the machine. The complexity of SW-administration and the importance of a well-trained and experienced urologist performing the treatments, however, are largely underestimated.

A basic understanding of the physics of shockwaves and a proper training in their administration should form the basis of good clinical practice in ESWL. In the early days all possible means were used to expedite the treatments: ungated SW-delivery, dual shocks, the use of different modalities including ESWL in the past, training in ESWL more often than not has been substandard. Also newer machines were all too often considered "plug and play".

Multifunctional lithotripter

A modern multifunctional lithotripter needs to have a good uro-table function allowing comfortable interventions in optimal conditions, stone centers ideally should be equipped with a multifunctional lithotripter.

A good analgesia regimen during ESWL will also improve outcome. Medical expulsive therapy (MET) with α-blockers can enhance the clearance of stone fragments.

Complication rates with ESWL are very low and with the exception of a perirenal or intracapsular hematoma (~0%) complications are minor. Not unimportant also is the fact that patients tend to prefer ESWL over more invasive procedures.

"Primum non nocere" is one of the pillars of the practice of medicine. In stone management this translates to choosing the least invasive method that will do the job with the lowest complication rate possible. Modern stone management should be based on a judicious combination of all available treatment modalities. This means that ESWL and endourological techniques should be complementary in rendering a patient stone free.

Every stone treatment should be tailored to both the stone and the stone bearing patient. As a consequence urolithologists interested in advanced stone treatment should be well trained and comfortable in all modalities including ESWL. In the past, training in ESWL more often than not has been substandard. Also newer machines were all too often considered “plug and play”.

In one study by Bohin et al. [1] 43% more SWs were needed to fragment model stones when only 8% of the coupling area was covered with air bubbles. During the coupling process, air bubbles are inevitably trapped in the coupling area between water cushion and patient. Until recently it proved impossible however to visually monitor the coupling area for the detection of air bubbles.

Some newer lithotripters now have a video camera in the therapy head allowing visual monitoring of the coupling area between water cushion and patient. This in turn reduces cavitation effects and, hence, reduces the risk of cavitation induced adverse tissue effects. In one study by Pischalkinov et al. [11] efficiency of stone fragmentation increased by 20-40% only when 2% of the coupling area was covered with air pockets.

Removing air bubbles

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Some newer lithotripters now have a video camera in the therapy head allowing visual monitoring of the coupling area with optically controlled removal of air bubbles from this interface. Optically controlled removal of air bubbles significantly reduces the total energy needed (number of SW and energy level) to obtain comparable treatment results. Theoretically, this reduction in total energy applied should also reduce incidence and severity of SW-induced adverse effects.

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Every stone treatment should be tailored to both the stone and the stone bearing patient. As a consequence urolithologists interested in advanced stone treatment should be well trained and comfortable in all modalities including ESWL. In the past, training in ESWL more often than not has been substandard. Also newer machines were all too often considered “plug and play”.

Multifunctional lithotripter

A modern multifunctional lithotripter needs to have a good uro-table function allowing comfortable performance of endourological procedures. Ideally, this utro-table is accessible over 360° and has a radiolucent carbon fibre table top with a high weight bearing capacity.

A videocamera in the therapy head to visually monitor the coupling interface is an advantage.

The system should also offer versatile imaging modalities with simultaneous use of fluoroscopy and ultrasound. The possibility to couple the SW-source both above and under table will allow all patients to be treated in a more comfortable supine position.

More and more patients unfortunately are obese and this can constitute a challenge to ESWL. According to literature ESWL failure correlates with an increased BMI (>30) and ESWL becomes less effective as SSD (skin-to-stone distance) approaches the focal distance of the lithotripter. In obese patients the main problem is proper targeting and focusing of the stones.

Focal distances of earlier lithotripters typically were 12-15 cm with 15 cm being the exception. Newer lithotripters now boast focal distances up to 27 cm. In combination with high resolution imaging systems, versatile coupling of the therapy head above and under table and positioning tricks by experienced operators, better results can be obtained even in obese patients.

Continued researches in new technical developments are expected to improve the performance of lithotripters in the future: modifications of SW-geometry, Burst Wave Lithotripsy (BWL), modifications of the p-phase (tensile phase) of the SW, and techniques to eliminate cavitation bubbles as soon as they have formed.

Finally, one cannot overemphasize the importance of proper training in ESWL. According to Neisius et al. [12], with proper training ESWL could become the new standard. "If urologists make use of a more comprehensive understanding of the pathophysiology and the physics of SW, much better results could be achieved in the future. This way we lead to renaissance and encourage IMS as first-line therapy for urolithiasis in times of rapid progress in endoscopic treatment modalities.”

References


Tuesday March 28 08:30-12:30 Planetary Session 3, Stones: ESWL
The urologist: Primary gatekeeper of men’s health

Central role of urologist in higher aged men

According to World Health Organization in Europe in the year 2015 the life expectancy for males has reached the level of 72.9 years. Apparently, this increase in longevity is accompanied by pathophysiological changes associated with aging.

Kaplan suggested the term health-related quality of life to represent a variety of topics (such as general health, physical symptoms, functioning, emotional health, cognitive, social, subjective, roles, spiritual matters, sexual matters, financial matters, job satisfaction and life conditions) that influence the quality of life.

Taking into consideration that several of the above topics are related with age-dependent changes of the urologist or genitourinary tract, it is obvious that the urologist has a role of paramount importance in the early diagnosis or in the early treatment of threats of a) the quality of life or b) the life per se of the ageing male. It should be emphasized that the longer the life expectancy in males becomes, the more important the role of urologist is designated for the health and quality of the life of the male. This means that the urologist is the appropriately trained physician to take care of the ageing male.

Age-dependent pathophysiological changes affect the role of urologist

Males with urinary incontinence, erectile dysfunction, low sexual desire, lower urinary tract symptoms, metabolic syndrome, late onset hypogonadism, prostatic cancer, and bladder cancer are very likely to choose the urologist as the first physician to ask for alleviation of symptoms or information about their laboratory findings. The frequency of all of the above pathophysiological changes is related to aging. However, several of the above symptom/diseases are unequivocally related to peripheral serum testosterone levels. Looking at the frequency or the clinical relevance of each of the above symptoms/diseases in various ages, their relationship with the age becomes evident as it is listed below:

a) Lower Urinary Tract Symptoms

Lower urinary tract symptoms are evident in 73.2% of men with age larger than 59 years. These studies indicate that the clinical relevance is present in about 50% of men with lower urinary tract symptoms. Strong evidence has been provided, indicating vividly a negative effect of lower urinary tract symptoms across several domains of urinary-specific-health-related quality of life and on the overall perception of bladder problems, general health status, and mental health.

b) Erectile Dysfunction

Erectile dysfunction is correlated with age. The frequency of erectile dysfunction is 1 to 2% when the male age is less than 30 years, 15% when the age is 40 to 49 years, 30% when the age is 50 to 59 years, 42% when the age is 60 to 69 years, and 50% when age is 70 to 79 years. Sexual health is a crucial aspect of overall health and quality of life. It has been demonstrated very vividly that interaction between erectile dysfunction and depression results in an impaired quality of life attributable to a decrease in free testosterone serum levels and that the decrease in testosterone levels is one of the causes of erectile dysfunction and low sexual desire.

c) Metabolic Syndrome

The frequency of metabolic syndrome is known to increase with the age. In European Male Ageing Study, 30.5% of patients have demonstrated metabolic syndrome (≥75 years) at the time of inclusion. In addition during the follow-up period of 6.3 years, another percentage equal to 18% developed metabolic syndrome. A different study has indicated that people with metabolic syndrome have reduced health-related quality of life compared with those who do not have this syndrome.

Several studies have indicated a link between low serum total testosterone levels and the presence of metabolic syndrome. In fact, subnormal peripheral serum testosterone levels in an aging male could cause/aggravate the symptoms of metabolic syndrome (Figure 1). As we have stated above, the increased life expectancy of men is related to ageing. However, another percentage equal to 18% developed metabolic syndrome. A different study has indicated that people with metabolic syndrome have reduced health-related quality of life compared with those who do not have this syndrome.

d) Fertility

Nowadays the percentage of divorced males is increasing and the age of marriage in the male becomes elevated, especially in western countries. Thus a significant subpopulation of aging males attempts to father his child. It is evident that the role of urologist to assist aging males to achieve paternity and to ameliorate any age-dependent declines in semen quality is of paramount importance. Furthermore, it has been suggested that advanced paternal age is linked to complications in pregnancy and genetic diseases in offspring.

An interesting study has demonstrated a longer time to achieve pregnancy in older fathers. Indeed, the authors reported a five-fold increase in time to pregnancy in older fathers; however, it has been additionally demonstrated that no consistent relationship is present between male age and semen concentration and b) performance of semen analysis demonstrates lower mean values for semen volumes, sperm motility, and sperm morphology in ageing male (Figure 2).

On the other hand, these alterations in the latter sperm parameters could still allow slow conception with relative ease. Thus, the detrimental effect of elevated paternal age on the fertilization process and embryonic capacity for implantation, as well, may not be attributable to subnormal values in some of the standard parameters of semen analysis but it may be due to defects in different sperm functional parameters/factors (whose values cannot be predicted by the standard parameters of semen analysis) such as a significant sperm DNA damage due to excessive production of reactive oxygen species (Figure 2), or sperm chromosomal aneuploidies.

e) Prostate Cancer

The risk of development of prostate cancer is 2.3% (1 in 35) when the male age is up to 50 years. This risk becomes 2.7% (1 in 38) when the male reaches 60 years and 3.8% (1 in 27) when the age is 60 to 70 years. Furthermore, the risk reaches the levels of 10.7% (1 in 10) when the age is larger than 70 years. The lifetime risk for the development of the prostate cancer is 14.6% (1 in 7). Quality of life in men with localized prostate cancer is further deteriorated after the employment of either radical prostatectomy or brachytherapy.

f) Bladder Cancer

Bladder cancer incidence is related to age, with the highest incidence rates being present in older males. In the UK in 2012-2014, on average each year more than 54% of cases were diagnosed in males with age of 75 years and older. Age-specific incidence rates rise gradually from age 50 to 54, in males, with a sharper rise in males from age 60 to 64. The highest incidence demonstrates a peak in men aged over 70 years. Age is a strong and independent risk factor for the development of bladder cancer. Several demographic reports provide evidence that males aged over 65 years have 12 times the incidence of bladder cancer in general in males aged under 65.

Age-dependent hormonal alterations reinforce the role of urologist to provide health care to the ageing male

As we have stated above, the increased life expectancy for men is related with the development of various age-dependent pathophysiologicals of the urinary or genital tract that have a detrimental effect on quality of life and occasionally threat the male survival. Thus, this cascade of events raises the role of urologist as a gatekeeper for the male health. However this important role of urologist is reinforced by the mission of urologist to provide care of the symptoms or complaints of the male related to age-dependent hormonal alterations.

The incidence of low peripheral serum T either with combined clinical symptoms or without the presence of clinical symptoms is 23.9% of all men over the age of 50 years. On the other hand, the incidence of symptomatic late onset hypogonadism is 2.2% and would increase with age from 0.1% for men 40 to 49 years to 3.2% for those 50 to 59 years, and to 5.1% for those 70 to 79 years.

As reference ranges for the lower normal value of testosterone, a cut-off of 12.1 nmol/L for total serum testosterone and for free testosterone of 243 pmol/L has been suggested. Late onset hypogonadism can give rise or aggravate pathophysiologicals/symptoms such as reduced reproductive potential, decreased in lean body mass and muscle strength, visceral obesity, decrease in bone mineral density with low trauma fractures, erectile dysfunction, fever and diminished sexual interest, hot flushes, fatigue, changes in mood, sleep disturbances, metabolic syndrome, insulin resistance and type 2 diabetes mellitus, and decreased physical function20,21.

Testosterone replacement in men with late-onset hypogonadism is expected to have a beneficial effect on bone metabolism, musclebuilding, erythropoiesis, libido, sexual satisfaction, and general mood.

Expert physician

It is obvious that the urologist is the expert physician to diagnose and treat pathophysiologicals of the urinary tract or genital tract that have increased frequency in the ageing male, affect the quality of life, or occasionally represent a life-threat. Several of these pathophysiologicals are related to or aggravated by age-dependent hormonal alterations.

Editorial Note: Due to space constraints the reference list has been shortened. Interested readers can email at communications@wurw.org to request for the full list.

References

3. Coyne et al., Risk factors and centered conditions associated with lower urinary tract symptoms: EpLuTs. BJU Int. 2009, 103:352-60
4. Coyne et al., the prevalence of lower urinary tract symptoms (LUTS) in the USA, the UK and Sweden: results from the Epidemiology of LUTS (EPiLuTs) study. BJU Int. 2009, 104:352-60
5. Lewis et al., Definitions:epidemiology/risk factors for sexual dysfunction. (SM. 2010, 17599-607
8. Cakaca-Perunić and Marić-Nedeljković, Testosterone’s extratropic role, is it useful in the diagnosis of erectile dysfunction and low sexual desire? Aging Male. 2018,254-258
11. Blaya et al., Total testosterone levels are correlated to metabolic syndrome components. Aging Male. 2018, 19:85-95

Monday 27 March 2017

Thematic Session 12, Male Replacement Therapy (TRT)

Figure 2: Rationale for impaired pregnancy rates. ROS: Reactive oxygen species; DFI: DNA Fragmentation Index

Figure 3: Barochemical events responsible for the development of a vicious cycle between low serum testosterone levels and increased in fat mass.

EUT Congress News
Blinded prostate biopsies under transrectal ultrasound guidance lead to inherent concerns of random sampling and clinical issues of over-detection of insignificant prostate cancer (PCa) as well as under-detection of clinically significant disease. The rapid development of multiparametric magnetic resonance imaging (mpMRI) recently modified the biopsy paradigm, evolving from pure blinded biopsies to lesion-directed sampling. We all know that mpMRI performance is particularly well suited for the detection of high-grade and large PCa and may increase the biopsy yield by targeting a suspicious lesion. Defenders of MR as systematic pre-biopsy prostate cancer triage test highlight that the majority of tumors by MRI are low-grade organ-conﬁned lesions and therefore, sampling of prostate gland not involved by MRI suspicious lesions may be omitted when performing biopsy.

Ideally, a pre-biopsy MRI followed by targeted biopsy in positive cases or omission of random biopsies in case of negativity, would result in an increased (or at least comparable) detection rate of clinically significant prostate cancer, in a decrease of unnecessary negative biopsies and in a reduction of truly insignificant detected PCa. Abandonment of systematic random biopsies would also be possible if the index lesion that could be perfectly targeted by MRI-directed cores, reflected in all cases the global disease aggressiveness.

Whether all these statements were 100% true, MRI-directed biopsies as only biopsy technique would become the standard of care. However, several concerns remain and limit the wide acceptance of MRI-targeted biopsies in clinical practice, given the advantage of lower costs and complications rate by reducing the number of cores taken into account for treatment decision, and that could be under-estimated by only index lesion-targeting biopsies. Although MRI-directed biopsies help in determining the more accurate assessment of the index lesion, this will not reﬂect in all cases the global aggressiveness of the disease or of the index lesion as deﬁned at ﬁnal pathology in radical prostatectomy specimens.

“MRI-targeted biopsies have shown the potential to overcome some limitations of traditional biopsy methods…”

When reading the MRI and the biopsy reports, can we (and the patient) trust the radiologist and/or the urologist who were involved?

Most high-level of evidence studies assessing the impact of MRI-targeted biopsies has been published by expert teams, treating patients in a few high-volume academic centers. The generalization of these results may be questioned on a large scale. Learning curve that has not yet been thoroughly assessed in the literature plays a substantial role in both MRI interpretation and MRI-directed biopsy realization quality. MRI ideally should be reported in a sub-specialist setting and should include continuous feedback from pathological outcomes which is rarely done by radiologists in routine.

The main clinical issue remains the detection of small focal grade-disease that needs to be treated and may be missed by imaging. Moreover, to be certain that mpMRI performs correctly, mpMRI findings should be formally validated against standard pathology on radical prostatectomy specimens, and not only against super-extended saturation template biopsies. Since the negative predictive value of mpMRI is not always 100%, inevitably also high-grade or significant PCa are missed by mpMRI, and could be sampled using the standard extended scheme in addition to targeted biopsies.

Up to 20% of men with no suspicious lesions or negative MRI-targeted biopsies harbour clinically signiﬁcant PCa detected on random cores. When considering whole-mount section of radical prostatectomy specimens as control, about 30% of high-grade tumors and lesions > 1 cm in diameter were missed by mpMRI. These rates cannot be considered as negligible.

Intratumoral heterogeneity

In case of positive MRI and positive targeted biopsies, do standard biopsies only provide useless information for prostate cancer management?

The presence of cancerous cells and their grade assessed by the Gleason score are obviously fundamental for treatment decision-making. And there is no doubt that MRI-targeted biopsies improve both cancer detection and grading (when associated with mpMRI) but how the extent of the prostate cancer through the gland, the number of positive cores, the percent of involved positive cores are well-studied prognostic factors for disease aggressiveness that pertinently inﬂuence our PCa management.

By analyzing only targeted biopsies, we would omit several meaningful factors that could have active surveillance, focal therapy, or conversely for immediate curative treatment in case of not visible but pathologically proven signiﬁcant bilateral disease. The multifocality and the intratumoral heterogeneity of PCa are two important features that have to be taken into account for treatment decision, and that could be under-estimated by only index lesion-targeting biopsies. Although MRI-directed biopsies help in determining the more accurate assessment of the index lesion, this will not reﬂect in all cases the global aggressiveness of the disease or of the index lesion as deﬁned at ﬁnal pathology in radical prostatectomy specimens.

The literature concluded that to date, serious adverse events after biopsies were rare and comparable whatever the biopsy technique (MRI-targeted biopsies with or without random biopsies).

MRI is not infallible

In summary, the diagnostic pathway implementing mpMRI before biopsy might greatly improve the biopsy yield (in terms of detection and disease characterization) when a suspicious lesion is demonstrated on MRI and a targeted biopsy performed. MRI-targeted biopsies have shown the potential to overcome some limitations of traditional biopsy methods, mainly by reducing false grading and by decreasing under-sampling in repeat biopsy setting.

However, to date, MRI is not absolutely infallible and MRI-directed cores do not target precisely in all cases. Systematic standard biopsies remain necessary in addition to the targeted cores, to adjust MRI misinterpretation and MRI-targeted biopsies errors, and to obtain the most accurate assessment of the entire prostate gland. Characteristics provided by random biopsies still help the clinician for patient counseling and treatment decision-making, in addition to MRI findings, but also to age, prostate volume, familial history. That’s why the urologic community on a global scale is not yet ready to give up systematic biopsies in addition to MRI-targeted biopsies, in spite of the not-debatable advantage of imaging-based biopsies in clinical practice.

Monday 27 March
15-16:30 - World Congress Session 5, Management of prostate cancer, Systemic biopsy is essential
Bladder cancer in depth
3rd Course of the European School of Urology Nursing
27-28 October 2017, Amsterdam, the Netherlands

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Module 3a - Neoadjuvant chemotherapy & chemoradiotherapy
Module 3b - Immunotherapy
Module 4 - Intravesical therapy
Module 5 - Patient’s perspective and uroent needs in bladder cancer
Module 6 - Group work – Part 1
Module 7 - Adherence to treatment
Module 8 - Prevention of bladder cancer
Module 9 - Nursing role from haematuria to cancer
Module 10 - Group work – Part 2

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The Organising Committee:
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**The EUA’s standpoint on meshes**

**Addressing safety issues and long-term assessments of surgical meshes are crucial concerns**

**Tufan Tarcan**
Professor of Urology

t
tUniversity of Istanbul School of Medicine

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Pelvic organ prolapse (POP) and stress urinary incontinence (SUI) are common, long-term health problem in women. One in every eight women above age 45 has symptomatic POP, and lifetime risk of POP among a single generation born in 1950s is by the age of 80 is between one in every five to 10 women with repeat operations up to one in three of the cases.

Considering the increasing life expectancy and the change in lifestyle, it is not difficult to estimate an increase in the demand for pelvic floor surgery in the future.

Surgical meshes were first used in 1950s in abdominal hernia repairs. After almost 40 years, they were further used for transvaginal POP (TVT) and POP with the intention to increase long-term success and durability of primary native tissue repairs. Suprapubic and transabdominal mid-urethral synthetic slings (MUSs) have quickly become the first choice of treatment for SUI associated with urethral hypermobility. They soon proved their long-term efficacy and safety compared to other surgical options and resulted in a total of 3.6 million sales between 2005 to 2013.

Mesh-augmented abdominal or vaginal POP repair has also rapidly gained world-wide acceptance, especially after the introduction of pre-shaped meshes with new surgical insertion tools and tissue fixation anchors. According to the US Food and Drug Administration (FDA) in 2010, there were about 113,000 POP repairs that used surgical mesh. About 35,000 of these were transvaginal procedures. Surgical meshes were, however, not free of complications that were mostly related to infection, tissue extrusion, mesh exposure and shrinkage leading to chronic pain, sexual dysfunction and severe dyspareunia. In this regard, the Scottish government requested a suspension in the use of mesh implants in both POP and MRI repairs by the NHS Scotland, pending safety investigations.

**SCENIHR recommendations**

In 2015, the European Commission has asked the Scientific Committee on Emerging and New health Risks (SCENIHR) to assess the health risks of meshes used in urogynaecological surgery. In the final document of SCENIHR, it has been stated that medical devices shall only be placed on the market, if they meet certain requirements defined in the Annex of the Council Directive 93/42/EEC and amendment 2007/EC. According to SCENIHR, in addition to specific design-related requirements such as an adequate level of safety and stability, a medical device must:

- have an acceptable risk/benefit ratio;
- be based on sound and solid knowledge by observing the principles of inherent safety;
- achieve the intended performance;
- must not compromise the clinical condition and safety of the patients during the entire product lifetime as defined by the manufacturer;
- must not be adversely affected by transport and storage;
- have risks from unintended side-effects limited to an acceptable level when weighed against the device’s benefits;
- be accompanied by all information required to use the device correctly;
- and have been proven safe and effective by clinical evidence.

The SCENIHR further recommended:

- The implantation of any mesh for the treatment of POP should be considered in cases when the use of mesh only is not possible.
- The amount of mesh for all procedures where possible. However, there is a need for further improvement in the composition and design of synthetic meshes, in particular for POP surgery.
- The introduction of a certification system for surgical meshes, wherein the important distinction is made between the mesh type for aMUS and the larger amount of mesh used to treat POP.
- The efficacy and safety of implanted meshes for SUI is evident and they can be recommended for use in clinical practice.
- The type and use of mesh for POP is associated with increased risks. It should be also restricted to expert individuals working in specialised departments. Whilst the risk associated with the trans-abdominal insertion of mesh for POP is considered more acceptable, its use should not be restricted to specialist practice.

**Consequences of the EUA’s Opinion**

The EUA’s and the EUGA’s joint conclusions are summarised in Table 1.

<table>
<thead>
<tr>
<th>Type of mesh</th>
<th>Consequences of the EUA’s Opinion</th>
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<tbody>
<tr>
<td>Transvaginal</td>
<td>- Mesh-augmented POP repair is not recommended, because of the large mesh required and the resulting donor morbidity.</td>
</tr>
<tr>
<td>Vaginal</td>
<td>- The use of absorbable mesh instead of either a transabdominal or transvaginal route is associated with a high failure rate.</td>
</tr>
<tr>
<td>Pelvic</td>
<td>- Transvaginal surgery using non-absorbable synthetic mesh for POP involves a much greater surface area of mesh and is associated with a higher risk of mesh-related morbidity than seen with transabdominal insertion of mesh.</td>
</tr>
<tr>
<td>Pelvic</td>
<td>- Synthetic sling SUI surgery is an acceptable alternative and had become efficient and widespread in the majority of patients with moderate to severe SUI, when used by an experienced and appropriately trained surgeon.</td>
</tr>
</tbody>
</table>

**Recommendations for the future**

- Development of specific treatment options for mesh use, rather than extractions from indications in abdominal wall repair;
- Establishment of detailed and complete databases registering the numerator and denominator, patient profile and surgical experience;
- Long-term assessment in adequate randomly controlled trials;
- Research new materials which should improve clinical practice according to a cautious and rigorous process;
- Follow the evidence-based EUA and EUGA guidelines;
- Support and register the specialist training of surgeons in urogynaecology; and
- Establish reference centres for re-interventions (complicated cases); and
- Use condition-specific patient-reported outcome measures whenever possible.

**References**


Monday, 27 March 2017

EUT Congress News

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Review of the day:

Monday 27 March 09.39-10.31: Plenary Session 6, Functional Urology

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Despite world-wide acceptance, surgical meshes are not free of complications (Photo: EUA-UriNeTo)
Dr. Juan A. Galán
EIVUS Board Member
Head of Urology
University Hospital of Virgen del Rocio (EU)

According to the current EAU Guidelines on Urgent Ureteroscopy (URS) in the elective setting in treating mid and distal ureteral stones regardless of size, and also for upper ureteral stones bigger than 1 cm. URS is normally planned after patients were previously sterilized (or percutaneously drained) as an emergency procedure due to persistent pain or fever, and in those diagnosed with ureteral calculus but without symptoms of urinary sepsis.

Once patients with a renal colic arrive in the emergency room (ER), their obvious request is to have their pain relieved, and approximately 95% want their stone immediately removed. Up to 83% patients would accept waiting up to four weeks with medical expulsive therapy (METF), when this possibility is explained, even though having pain from time to time; however, around 17% would still demand surgical solution. With further clarification on the possible active treatment for the ureteral stone (where available as emergency intervention), 39% and 37% of the patients would accept the possibility of shock wave lithotripsy (SWL) within 24 to 48 hours or URS within 24 hours, the latter option being as high as 64% after explaining URS as the most effective treatment for removing or fragmenting their ston(e)s.

Depending on several factors related to ER and urology services organization, health system, availability of anesthesiologists for these purposes, and economical, familial and patient professional issues, the emergency active treatment of the stone can be offered to the patients of the radiology of a fast solution of their problem, provided no septic complications, although routine stenting (approximately 4-5%) and normally low-grade symptoms or lab signs of sepsis exist. For that reason, early application of ureteroscopy, preferably in the context of an ureteral stone retrieval procedure renal function seems to return to normality in 83.6 - 96.3% of patients within seven days after a successful EU. In a recent CROES study (2014), 681 patients from six studies concluding that it was a feasible approach for the management of mid and distal stones, that fulfilled the predefined inclusion criteria were included. EU can be considered as the most effective first-line treatment for removal of the ureteral stone.

A meta-analysis was performed by Picozzi et al (2012), with the aim of understanding the role of the ureteral stone retrieval procedure renal function seems to return to normality in 83.6 - 96.3% of patients within seven days after a successful EU. In a recent CROES study (2014), 681 patients from six studies. A subgroup of younger, healthier patients with smaller stones might, in their opinion, benefit most from the procedure.

As renal function impairment can occur, mostly when bilateral or unilateral in single kidney ureteral stones, this approach should be taken into account to rapidly normalize a obstructive problem. After a successful EU treatment renal function seems to return to normality in 83.6 - 96.3% of patients within seven days depending on the different studies.

Another sub-group of patients are pregnant women with obstructive ureteral stones. The role of this patient group has been an issue of concern due to high complication rates. No patient in EU group was re-admitted after the procedure. They concluded that EU has the main advantage of offering both immediate stone fragmentation and the relief of acute on set colic pain that caused extreme discomfort.

Gueriotti et al prospectively randomized 271 consecutive patients with ureteral calculus and normal renal function to EU (95) or delayed (100) URS. EU showed equal efficacy and safety compared with the electrohydraulic shockwave lithotripsy in the first group (91% & 80% respectively).

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Andrograph play an important role in male hypogonadism and male health. A lack of testosterone in early life can result in uregulative abnormalities, such as cryptorchidism and hypospadias.

Later in life testosterone can decrease as a result of aging, but mainly due to obesity and chronic diseases. The incidence of symptomatic male hypogonadism in ageing men is 2% to 5%. The main symptoms of androgen deficiency are similar for both males and females. Table 1 highlights symptoms of androgen deficiency.

Table 1: Clinical symptoms and signs suggestive for androgen deficiency

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Description</th>
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<tr>
<td>Diminished cognitive function</td>
<td>Impaired decision-making, memory, and concentration</td>
</tr>
<tr>
<td>Metabolic syndrome</td>
<td>Dyslipidemia, hypertension, insulin resistance, type 2 diabetes mellitus</td>
</tr>
<tr>
<td>Sleep disturbances</td>
<td>Insomnia, daytime drowsiness</td>
</tr>
<tr>
<td>Changes in mood, fatigue and anger</td>
<td>Depression, irritability, decreased energy</td>
</tr>
<tr>
<td>Erectile dysfunction</td>
<td>Impaired勃起, low libido</td>
</tr>
<tr>
<td>Reduced sexual desire and sexual activity</td>
<td>Decreased sexual interest, desire for physical contact</td>
</tr>
<tr>
<td>Decreased body hair</td>
<td>Hair loss on the face, body, and pubis</td>
</tr>
<tr>
<td>Small testes</td>
<td>Reduced testicular size</td>
</tr>
<tr>
<td>Corporal rupture</td>
<td>Penile fracture</td>
</tr>
<tr>
<td>Decreased body muscle strength</td>
<td>Weakness, fatigue</td>
</tr>
<tr>
<td>Decreased lean body mass</td>
<td>Loss of muscle mass</td>
</tr>
<tr>
<td>Visceral obesity</td>
<td>Excess body fat accumulation, especially around the waist</td>
</tr>
<tr>
<td>Penile ecchymoses or hematoma</td>
<td>Swelling, discoloration of the penis</td>
</tr>
<tr>
<td>Sudden penile detumescence</td>
<td>Rapid decrease in penis size</td>
</tr>
<tr>
<td>Penile “popping” sound or sensation</td>
<td>Clicking or popping sound felt in the penis</td>
</tr>
</tbody>
</table>

Diagnosis

The diagnosis of male hypogonadism is based on clinical symptoms suggestive for androgen deficiency. The diagnosis can be confirmed by measuring testosterone levels. Male hypogonadism can be classified in primary and secondary categories. Table 1 highlights clinical symptoms suggestive for androgen deficiency.

The European Male Ageing Study (EMAS) found that in men aged 50 to 79 years, 3.9% of men aged 50 to 59 years and 6.5% of men aged 60 to 79 years had testosterone levels below the normal range. The number of men with low testosterone in this study was 7%, but only 2% of men were hypogonadal. The authors found that three sexual symptoms had a syndromic association with low testosterone levels, namely erectile dysfunction, decreased frequency of sexual thoughts and morning erections.

Testosterone and sexual dysfunction

Hypogonadism is present in 25 to 36% of men that present with sexual dysfunction. Testosterone not only modulates the brain and increases sexual desire and activity. It also improves penile response through binding with the androgen receptors. Spontaneous erections will decrease with low testosterone due to a reduction of nitric oxide synthesis in the cavernous bodies of the penis.

Recently, three large randomized trials on the effects of testosterone therapy in hypogonadal men showed a clear improvement of sexual symptoms. Brock et al. showed a significant increase of sexual arousal, interest and drive in hypogonadal men taking testosterone gel. In a recent large study, Snyder et al. randomized 790 hypogonadal men, aged 65 and older, for either testosterone gel or placebo. The study showed that raising testosterone in hypogonadal men had a moderate beneficial effect on sexual symptoms and on mood. Hackett et al. showed in a large randomized trial in hypogonadal diabetic patients with sexual dysfunction that testosterone supplementation inhibited several sex hormones and sexual function; sexual desire already improved after four to eight weeks of therapy, erectile dysfunction first after three months of therapy and only significant in men with testosterone levels below 300 ng/dL. Testosterone therapy increases the production of androgens.
How can microbiome affect the urinary tract?

Urine microbiome: A new paradigm in urogenital infections and diseases

Co-authors: Kurt Naber (DE) and Florian Wagenlehner (DE)

A paradigm shift

Until recently the generally accepted paradigm implied that urine of healthy people is sterile. In case of urinary tract infection (UTI) a significant bacteriuria is estimated by the number of colonies of known uropathogens (Figure 1).

In the meantime numerous studies have shown that many different microbial communities might be detected in the urine of practically all healthy people, if cultured on especially enriched media. Further, the development of metagenomic sequencing technologies (MGS) and the introduction of bioinformatics enabled us to analyze complete genomes of microorganisms and brought us into the omics era (Figure 2). The whole microbiome was introduced to describe the "characteristic microbial community occupying a reasonably well defined habitat which has distinct phyico-chemical properties. The term not only refers to the microorganisms involved but also encompasses their "landscape"4,5.

Man’s urine meets the criteria for being a habitat with its own microbiome. We have learned that the urorheal tract in healthy people might harbor genomes from more than a hundred different microorganisms. This information challenges our reference points and the principles for classification of diseases of the urorheal tract6.

Disease classification

Symptomatic UTIs are defined as a host reaction by the presence of symptoms, finding of bladder irritant and other immune reaction mediators as well as evidence for the presence of a causative pathogen. By early consensus, the significant number of pathogens was set at ≤ 105 colony forming units per milliliter6. This number is now modified by the clinical situation, the sampling technique and the identity of the suspected pathogen, for example a CFU of 102 is considered significant when technique and the identity of the suspected pathogen, modified by the clinical situation, the sampling technique and the identity of the suspected pathogen, was explained as a host reaction. As metagenomic sequencing reveals that the presence of microorganisms in the genitourinary tract is very diverse and varies with sex, age and sexual activity, the interplay between the genes of the microorganisms and the host is becoming more interesting.

Figure 1: Outcome of 16S rDNA sequencing. Bacterial genera detected in healthy female urine. Reprinted from (3)

From the field of infections we know that the host reaction is precipitated by microorganisms invading urothelial cells or the blood stream. In patients with symptomatic UTI, there is a strong correlation between CFU/ml and the number of neutrophil numbers. Children prone to develop pyelonephritis have lower expression levels of chemokine receptors (CXCR1) in healthy controls and the number of mutations in the CXCR1 gene has been identified7.

Some urological diseases have been defined by the presence of microorganisms (urethritis, prostatitis, cystitis, pyelonephritis, sepsis), others by the absence of microorganisms (active neurogenic bladder, disorders of bladder function, bladder syndrome, bladder pain syndrome/interstitial cystitis and chronic pelvic pain syndrome/chronic inflammatory prostatitis), and others again by the absence of microorganisms in healthy people and in diseases where the diagnosis is based on "sterile urine", we have to acknowledge that the concept of sterile urine was a myth8.

However, sequencing technologies do not tell if genomes in the urine stem from living or dead microorganisms and clinicians must keep in mind that they are only effects of metabolizing organisms. From a clinical perspective the term "sterile urine" might therefore be replaced by "being voiding in significant numbers of culturable uropathogens". Interestingly, the EAU Section of Infections in Urology (ESIU) classification of UTI from 2010 is only classification that considers treatability by antibiotics as a criterion for severity assessment. This classification is therefore in a good position to be developed further depending on new findings about the role of the microbiome in various urological diseases.

The host reaction

The symptom language of the lower urinary tract is very much the same in diseases thought to have different etiologies such as cystitis and pyelonephritis, and most symptoms are explained as a host reaction. As metagenomic sequencing reveals that the presence of microorganisms in the genitourinary tract is very diverse and varies with sex, age and sexual activity, the interplay between the genes of the microorganisms and the host is becoming more interesting.

From the field of infections we know that the host reaction is precipitated by microorganisms invading urothelial cells or the blood stream. In patients with symptomatic UTI, there is a strong correlation between CFU/ml and the number of neutrophils. Children prone to develop pyelonephritis have lower expression levels of chemokine receptors (CXCR1) in healthy controls and the number of mutations in the CXCR1 gene has been identified7.

Mice that are lacking toll like receptor 4 (TLR4) do not develop inflammation and symptoms of UTI if they are challenged with uropathogenic E. coli. Likewise, it has been shown that children with dysfunctional TLRs, due to gene polymorphism are susceptible to develop asymptomatic bacteriuria (ABU) with a low inflammatory response rather than symptomatic infection7.

Details of the immunological host response provide evidence for a genetic predisposition towards development of UTI and ABU. As this information has been reviewed in our scientific forum, let us focus on the identification of single uropathogens in the diagnosis infections to the roles of genomes from bacteria and human to the pathogenesis of urological diseases in general.

Caricogenesis

We have known since long that there is a relationship between infections and cancer like in Helicobacter pylori and gastric cancer; Enterobacteriaceae and colon cancer; Non-Hodgkin’s and Burkitt’s lymphomas; and Human herpes virus 8 and Kaposi sarcoma. Within the genitourinary tract, there is a relation between Schistosoma hematobium and bladder cancer and between Human Papilloma Virus and several urological cancers. Our own clinical experience is that immune deficiency increases the risk of developing both infections and cancer in the genitourinary tract.

There are many similarities between sexually transmitted infections and cancer in terms of invasion, spread through lymphatic vessels to regional lymph nodes and through blood vessels to distant organs. Years of latency and resistance to effective drug treatment are seen in both infections and cancer.

Caricogenesis may be caused by DNA from microorganisms exploiting the host cellular machinery for transcription and replication thereby interfering with genetic and epigenetic control mechanisms for differentiation and proliferation. These mechanisms are well described for HPV where there is latency of 10-30 years between infection and the manifestation of a malignant tumor and where an effective vaccine is now available9,10.

All bacteria that are exposed to antibiotics may develop resistance, not just the causative pathogen in a UTI. There is also a risk that members of the normal human microbiome become extinct for certain periods of time. Recognition of the big diversity of microorganisms makes it clear to us that using broad spectrum antibiotics for prophylaxis and treatment is to shoot sparrows with cannons. This is the rationale for recent studies on treatment of UTI with anti-inflammatory drugs only, for phytotherapy and for the development of antibodies against specific types of uropathogens. Moreover, the frequent use of antibiotics has strikingly been associated with an elevated risk of some malignancies.

Future research

The concept of a urine microbiome has introduced a new paradigm in our understanding of urological infections and urological diseases in general. Our focus is shifting from pathogens to genes and the microbiome in general and numerous questions arise. When do all the different microorganisms enter the urorheal tract, when are they alive, what is their interaction with each other and what is their role in the development of infections, stones, cancer, and other urological diseases? What is the effect of antibiotic prophylaxis and antibiotic treatment on the microbiome? A vast new research field is waiting to be explored.

Editorial Note: Due to space constraints the reference list has been shortened. Interested readers can email at communications@uroweb.org to request for the full list.

References


Figure 2: Outcome of 16S rDNA sequencing. Bacterial genera detected in healthy female urine. Reprinted from (3).
Implementation of high quality prostate MRI
High-quality reading of prostate MRI is crucial for effective use

Dr. Maarthen de Rooij
Department of Radiology & Nuclear Medicine
Radiouwleven
Nijmegen (NL)

Co-Author: Prof. Jelle D. Barentsz (NL)

Multiparametric MRI (mp-MRI) is now a well-established tool to improve the current diagnostic pathway of prostate cancer (PCa). Several recently published systematic reviews and meta-analyses show that the use of mp-MRI and mp-MRI targeted biopsy in men with a suspicion on prostate cancer (PCA) yields higher detection of significant PCAs than the current standard of care using systematic transrectal ultrasound-guided biopsy (TRUS biopsy).

Perhaps even more important, the use of mp-MRI can cause a reduction of the detection of indolent disease – which does not require invasive treatment – and can prevent unnecessary biopsies. Therefore, when used as a triage test, mp-MRI could be an important contributor in causing a shift in the paradigm of over-diagnosis and over-treatment of PCA.

However, other studies show less promising results, with highly variable negative predictive values (NVPs) ranging from 61% to 99% for the detection of clinically significant PCAs. One of the possible explanations for these variable results is that the reading in some of the studies was performed by non-trained radiologists or radiologists with little experience in reporting prostate MRI. In the hands of highly experienced readers, a PCA is often a ‘real’ PCA, with NVPs for clinically significant PCAs ranging from 82% to 99%.

Given the disease frequency and the growing importance of prostate imaging, radiologists, but also urologists involved in prostate MRI, must be able to speak the same ‘language’, in order to secure high quality exams. In an effort to harmonize practices, professional guidelines as the European Society of Urogenital Radiology (ESUR), and the American College of Radiology (ACR) have recently adopted such a ‘language’; the Prostate Imaging Reporting and Data System (PI-RADS). PI-RADS is a standardized lexicon to classify prostate lesions, and to communicate prostate MRI findings with the referring disciplines. PI-RADS version 2 provides a structured training and certification is important for high-quality exams. In an effort to harmonize practices, professional guidelines as the European Society of Urogenital Radiology (ESUR), and the American College of Radiology (ACR) have recently adopted such a ‘language’; the Prostate Imaging Reporting and Data System (PI-RADS). PI-RADS version 2 provides a standardized lexicon to classify prostate lesions, and to communicate prostate MRI findings with the referring disciplines.

For radiologists, this should include initial training courses and (personal) certification, the development of quality criteria, and quality control. To improve the current diagnostic pathway of PCA, many lessons can be learned from the system in breast imaging. Several measures that could be used to secure high-quality reading of prostate MRI, could be:

- To take part in multidisciplinary meetings and peer review or a scientific centre to allow learning from experts.
- To perform a minimum amount of cases per week (e.g. > 10 prostate MRIs/week).
- To ensure a proper education of the radiologist, the quality of the individual radiologist, the quality of the examination, and the equipment.
- To ensure that the radiologist is aware of the current recommendations and follow-up.
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To become ‘aware competent’, a proper initial course is mandatory for radiologists, urologists, other specialists involved in prostate imaging, and PCA patients. The following level of education is proposed to achieve ‘aware competence’ for radiologists and urologists involved in PCA imaging:

- To perform a minimum amount of cases per week (e.g. > 10 prostate MRIs/week).
- To ensure a proper education of the radiologist, the quality of the individual radiologist, the quality of the examination, and the equipment.
- To ensure that the radiologist is aware of the current recommendations and follow-up.
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Conclusions
Structured training and certification is important for radiologists that are willing to learn prostate MRI. Equally important however, is training of urologists, and other involved physicians, to be able to communicate in the same ‘language’, since they have to rely on prostate MRI during daily clinical practice. For radiologists, this should include initial training courses, but also refresher (hands-on) courses and double-reading (personal) certification, and quality control. Expert panels of the ESUR and ACR should be on the lead to develop criteria to secure high quality reading of prostate MRI, and allow further implementation by the urological community.

Note: Due to space constraints the reference list has been omitted. Interested readers can email EUT@uroweb.org for a complete listing.

Prostate enucleation using low energy pulsed Thulium laser with preservation of ejaculation

Dr. J.B Roche
Groupe Urologie Saint-Augustin – Bordeaux (Fr)

In this session, consultant urological surgeon Jean-Baptiste Roche enucleates a 130g prostate using the 200W HemaThulium Laser from Roscamat.

Harnessing the latest in laser technology, this low-energy pulsed device provides excellent results in terms of post-operative urinary function, minimizing the risk of incontinence, pelvic discomfort, and storage-related symptoms.

When combined with an anatomically precise application, this type of dissection affords the maximum level of protection to the patient’s ejaculatory function, and greatly reduces the risk of recurrence.

The presentation gives a clear, accessible, step-by-step insight into laser-based prostate enucleation, showing all phases of the procedure, from dissecting the apex of the prostate through to final morcellation.

Pre-recorded video Session
March, 25th
16:55
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Procedure performed with 200W HemaThulium Roscamat Laser

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DMT159-011117-REVA-EN
Greeks biographer and author, Plutarch, once said “For the correct analogy, the mind is not a vessel that needs filling, but wood that needs igniting.”

Since its inception, the European School of Urology (ESU) has stimulated learning, development of skills and sharing of knowledge among urologists. Currently, over 36,000 medical professionals from around the world benefit from the ESU’s activities and projects. Access to quality education is a top priority of the ESU. Its success is anchored on the continued support of the ESU faculty, a community of 150 opinion leaders and experts in various urological specialities.

This year, at the 32nd Annual EAU Congress (EAU17), the ESU delivers an array of its successful activities such as courses, hands-on trainings, workshops, and new educational activities such as a surgical video platform and social media courses. 

ESU Courses

The ESU’s course programme at EAU17 covers the full scope of urology and is that which it offers social media courses and services during EAU17.

“Personalised hands-on workshop for beginners”
A total of four workshops are scheduled from March 25 to 27 March from 11:00 to 13:00 for novices in social media. A Young Urologist Office (YUO) representative is the designated guide and mentor. Each workshop is tailored to personal interests, but topics could include basic social media etiquette, to mention a few.

“Advanced social media course: Take it to the next level”
For basic inquiries, The EAU Community Manager provides support. For more complex issues, The EAU Community Manager answers basic questions, assists in creating social media accounts, and helps post on various platforms.

On social media

The ESU recognises the potential of social media in the field of urology and is that it offers social media courses and services during EAU17. The ESU’s new online educational tool, Surgery in Motion School, for free. To learn more about the European School of Urology, visit www.uroweb.org/education or contact the ESU at esu@uroweb.org.

The ESU’s course programme covers the full scope of urology at the Social Media Helpdesk from 11.00 to 13.00 on 25 March. No registration necessary. This service will be offered in addition to the Social Media Helpdesk from 11.00 to 13.00 on 25 March. No registration necessary. This service is provided by the Experts. 

The ESU’s course programme covers the full scope of urology by the Experts.

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EUREP

The annual European Urology Residents Education Programme (EUREP) is one of the ESU’s flagship teaching programmes. For over two successful decades, EUREP has been providing significant updates and overview of the latest urological practice presented by a distinguished European faculty.

Hands-on Training Courses

The ESU’s masterclasses provide the high-level training to update and equip urologists with specialised skills. Thanks to the comprehensive programme of the masterclasses, deep knowledge is gained in specific sub-specialised fields such as Female and Functional Reconstructive Urology, Lasers, Operative Bering, Prostatic Obstruction, Urolithiasis, and Focal Therapy.

Masterclasses

Other ESU educational activities

The ESU also offers online tools via its informative e-courses and webinars. These provide the users the flexibility to work on their professional development at their own pace.

All accredited e-courses comply with the EU-ACME and UEMS/EACCME guidelines for e-learning. The information provided is in line with the EAU Clinical Guidelines. The ESU’s new online educational tool, UROwebinars, offers urologists the latest developments and provides opportunities to interact and pose questions.

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Prostate cancer is the only solid organ cancer that is traditionally diagnosed using a non-targeted biopsy technique. Currently, transrectal ultrasound prostate biopsy (TRUS-Bx) is the standard of care, even though ultrasound is not adequate for visualizing prostate cancer. TRUS-Bx, which involves a systematic sampling of the prostate by region, may only sample around 0.04% of the entire gland, and is well known to under-sample apex and anterior regions of the prostate. The poor cancer detection rates of TRUS-Bx have led to a search for alternatives approaches to prostate biopsy. Consequently, research in the field of prostate MRI and development of MRI-TRUS software fusion biopsy devices has ushered in a new era of accurate targeted prostate biopsies. As MRI-targeted biopsy (MRI-TB) becomes more widely available to ourselves if there is still a need for systematic biopsy.

mpMRI

Multimodal MRI (mpMRI) consists of several modalities, including T2 weighted imaging, diffusion weighted imaging (DWI), dynamic contrast enhanced MRI (DCE), and sometimes MR spectroscopy. Combined, these modalities produce a sensitivity and specificity of 90% and 88% in the detection of prostate cancer 4, 5. When prostatectomy specimens were analyzed in patient-specific molds based on mpMRI images, the positive predictive value was as high as 98%. The excellent diagnostic capacity of mpMRI is what gives MRI-TB the potential to be a stand-alone technique.

MRI-targeted biopsy

MRI-targeted biopsy (MRI-TB) uses MRI images to guide biopsy of specific lesions in the prostate and can be accomplished in three ways: direct “in-bore” MRI biopsy, software fusion of MRI and ultrasound images (MRI-TRUS fusion biopsy), and cognitive fusion. In-bore MRI biopsy involves performing the procedure with patients in the MRI gantry itself. This procedure is time consuming, involves more “opportunity cost” (time in the MRI scanner), and requires a high degree of technical expertise. MRI-TRUS fusion biopsy is now the most widely used MRI-TB technique. It is an office-based technique which involves registration of the newly obtained image of the real-time ultrasound obtained during the procedure. Tumors that are found to be suspicious on mpMRI can be biopsied directly in-vivo. Cognitive fusion is a less common used form of image-guided biopsy in which the operator uses prior knowledge of prostate tumor locations on MRI to direct the needle in an ultrasound-guided biopsy.

The clinical trial completed at the National Institutes of Health (NIH) demonstrated that MRI-TRUS fusion biopsy detected 30% more high-risk and 13% fewer low-volume cancers, a result which has been corroborated by others and multiple systematic reviews 6-8. In addition to this overall improved performance, fusion biopsy has also been found to have superior performance in enlarged prostates, where standard biopsy has a higher risk of under-sampling the gland, and in locations that are traditionally difficult to sample, such as anterior and apical regions 9-11. An example of this is seen in Figure 1, which shows an anterior prostate lesion with Gleason 4+5 disease missed on multiple systematic biopsies and detected on MRI-TRUS fusion biopsy. This is one case demonstrating the accuracy of targeted biopsy- overall, MRI-TB alone has been found to be superior to standard biopsy in detecting and differentiating more clinically significant and fewer clinically insignificant cancers.

It is this superior differentiating ability that gives MRI-TB another advantage over TRUS-Bx. As stated above, targeted biopsy is less likely to detect clinically insignificant tumor cancers. Both the PROSART trial and the PROTECT trial, large, multicenter randomized studies, determined that treatment of these low-risk cancers did not significantly reduce mortality rates, even when patients treated in their 80s.

Conclusions

MRI-TB, in particular MRI-TRUS fusion biopsy, has been shown in numerous studies to accurately detect the majority of clinically significant prostate cancers, many of which are missed on TRUS-Bx. In contrast, TRUS-Bx has a low negative yield and adds to a great deal of the over-diagnosis of clinically insignificant cancers. The treatment of these low-risk cancers is a burden, not a benefit, and adds to both healthcare costs and complication rates. In addition, the inconclusive nature of a negative TRUS-Bx, particularly in patients with prior negative TRUS-Bx, leads to a great deal of unnecessary anxiety and concern for both patients and providers. Thus, in facilitating appropriate equipment and training, and with adequate experience with prostate imaging and MRI-guided techniques, targeted biopsies alone should be considered for the evaluation and diagnosis of prostate cancer.

Editorial Note: Due to space constraints the reference list has been shortened. Interested readers can email at communications@buroweb.org to request the full list.

Figure 1. A 65-year-old male with elevated PSA and a history of multiple negative TRUS-Bx and one negative saturation biopsy. This 7T MR image shows an anterior prostate lesion (asterisk), which was found to contain Gleason 4+3=7 cancer on MRI-TRUS fusion biopsy.

References

1. Salami SS, Ben-Levi E, Yaskiv O, et al. In patients with a previous negative prostate biopsy and a suspicious lesion on magnetic resonance imaging, is a 12-core biopsy still necessary in addition to a targeted biopsy? BJU international. Apr 2015;115(3):354-360.
The uro-epithelium is a highly specialized, stratified epithelium that covers the inner surface of the urinary tract from the renal pelvis to the distal urethra. The urothelium has long been considered a mere passive barrier, but evidence is accumulating that it is much more than that.

In fact, the urothelium is a very dynamic structure that forms a diastatic barrier, regulates the transport of water, ions and solutes across the bladder mucosa and plays a pivotal role in sensing the bladder's content.

**Urothelium: A dynamic barrier**

The urothelium can maintain a highly impermeable barrier for water, solutes and pathogens, despite large variations in mucosal surface area during bladder filling and voiding. Tight junctions at the apical membranes of adjacent umbrella cells create a high-resistance barrier for paracellular transport. The apical membrane of umbrella cells contains highly specialized plaques of lipids and transmembrane proteins (uroplakins) and is covered by a glucosaminoglycan layer to create a high trans-epithelial resistance.

The bladder is able to maintain this extra-ordinary barrier during bladder filling due to unfolding of the apical mucosal surface, flattening of the umbrella cells and expansion of their apical membrane by exocytosis of discoidal vesicles.

Despite the presence of this specialized barrier, the high concentration gradients between the urine and the urothelium will drive passive leakage of ion and solutes into the suburothelium. As such, the composition of urine can slightly be changed during urine storage. Therefore, it is not surprising that pathways for transport of Na⁺, K⁺, Cl⁻, urea and water have been described in the uro-epithelium.

Studies in humans and rodents have demonstrated that urothelial cells express aquaporines (AQP3, -4, -5) and water have been described in the uro-epithelium.

The uro-epithelial sensory web

Underneath the impermeable apical barrier of the uroepithelium, umbrella cells interact with myofibroblasts, blood vessels and mucosal nerves to form a sensory signaling network, called the uro-epithelial sensory web.

This mucosal network is the principal sensory structure of the bladder enabling us to experience different “urinary” sensations: the urinary bladder is an intelligent structure that acts as an impermeable and dynamic barrier against the toxic solutes of urine and forms a uro-epithelial sensory web that functions as the bladder’s senses.

Urothelial cells express a wide variety of ion channels and receptors, including TRP, ASIC and ENaC channels, purinergic (P2X7 and P2Y1 receptors), nitric oxide (and α, β adrenergic- and α, β antagonists), and protease-activated (PAR) receptors, enabling these cells to detect mechanical stimuli (mucosal stretch) and chemical substances present in the urine or released by neighboring cells.

Activation of these urothelial receptors can initiate a variety of responses: it can change the flux of water and solutes across the urothelium (or inhibit) the trafficking of membrane vesicles and induce the release of signaling molecules to neighboring or underlying cells.

The urothelium is able to release adenosine, ATP, AD, α and prostaglandins that can stimulate adjacent urothelial cells (autocrine) and underlying nerve fibers, interstitial cells and smooth muscle cells (paracrine). One of the most studied urothelial messengers is ATP. During bladder filling, urothelial cells gradually release ATP in response to mucosal stretch. This ATP will activate P2X7 and P2Y1 receptors on neighboring urothelial cells, hereby promoting urothelial membrane trafficking to transport ions and water across the mucosal surface. Secondly, ATP will activate P2X3 receptors in sensory nerve fibers, modulating the sensory input to the central nervous system.

Finally, by affecting smooth muscle tone (via P2X1 receptors) and interstitial cells (via P2Y1 receptors), ATP will also affect afferent signaling indirectly. Alternatively, urothelial receptors allow these cells to respond to signaling molecules released by underlying nerve fibers and interstitial cells, including neuropeptides, Ach and ATP.

**Physiological and clinical relevance**

The physiological role of the bladder is to store urine and efficiently evacuate it at a socially convenient moment. The urothelium and its associated sensory web are indispensable for the urinary bladder to function normally. They allow the bladder to safely store highly concentrated ions and waste products excreted in the urine for a prolonged period.

The sensory web will help the bladder to determine its filling state and will provoke rapid urine expulsion when instants or bacterial agents are detected. Similarly, when the urothelial barrier is breached, the uro-epithelial sensory web will initiate a signaling cascade that stimulates the bladder to empting to minimize re-absorption of urine. Moreover, it will stimulate the quick restoration of the urinary barrier.

Consequently, malfunctioning of the urothelium can trigger or maintain bladder dysfunctions. Several drugs specifically targeting urothelial receptors have been successfully used in preclinical models to treat a variety of lower urinary tract disorders. It is anticipated that some of these drugs will proceed to clinical testing in the near future.

In conclusion, the urothelium is an intelligent structure that acts as an impermeable and dynamic barrier against the toxic solutes of urine and forms a uro-epithelial sensory web that functions as the bladder’s senses. As such, the urothelium is an interesting focus for new treatment strategies in lower urinary tract disorders.

**References**

Unlocking the potential of social media

Leveraging social media is about taking our nursing expertise to social media

In recent years social media use by nurses has become more commonplace and more accepted as a professional tool. With social media being used globally by 2.37 billion people (and rising) (Chaffey 2016), the assumption can be made that nurses are using social media, albeit for social reasons. So the question now is to encourage and support nurses to unlock the potential of social media with regards nursing.

Nurses need to start to be constructive about the use of social media to make it work for them, to make it work for their organisations, and to make it work for the people they care for...nurses need to start doing social media well. There are four broad areas in which nurses need to focus on to realise the potential and harness the power of social media in healthcare:

- Using social media to inform nursing practice: Social media has an enormous capacity to inform nursing practice; connections made are often global and leading access to a whole world of expertise via the humble smartphone. This then leads to learning via social media, through blogs, tweet, chats, videos, podcasts, Twitter updates, Facebook updates, infographics, tapping into conferences remotely or even an increased access to opportunities beyond our workplace. All of this can be used for professional development and to improve our practice.

Furthermore, the resource of people that exists in social media is unprecedented and something that nurses can hugely benefit from; and as more people use social media the greater the potential it has for informing nursing practice. The role that social media has to play in health research is also worth considering; researchers and academics are just beginning to realise that social media gives access to a plethora of people and data. Advances are being made in this area, with the ultimate aim of informing practice.

- Using social media as part of nursing practice: With so many people engaging in social media it is only natural that the people we care for are also using these spaces to connect, learn and support each other. Nurses need to start to think in terms of how they can support and utilise this in their own practice, where once we would perhaps support a group of patients in a community centre we now need to think differently and use tools like WhatsApp, Twitter and Facebook.

Enabling the people we care for to connect with each other and support each other is an area of social media that needs to be developed and explored more. In addition, the connections that nurses make via social media can mean that nurses have expertise beyond their own locality and at their fingertips, leading to better outcomes for patients. Nurses can also learn from others experiences via social media, enabling them to go straight to a solution that is known to work and not having to “re-invent the wheel,” meaning that nurses will be more likely to get it right the first time for their patients. Social media also offers huge opportunities to facilitate and foster co-production; by existing in the same spaces it makes it easier for nurses and patients to understand one another and communicate. Finally, social media can enable nurses to ask questions to the expert crowd, giving a wider and more balanced view of things in, often, a short space of time.

- Using social media to share the nursing practice: Each and every day there is so much to learn from in nursing; experiences of what has worked well and what hasn’t worked quite so well shape our practice and the actions of our teams and organisations. By sharing these experiences more widely, nurses not only set themselves up as being open, generous and supportive but also the organisations they work for and are associated with will become forward-thinking organisations. Social media is a low-cost worldwide platform; with many social media sites being free it’s often only the time to engage that needs to be considered. With the ease of use, accessibility and reach of social media added into the mix, social media becomes a very attractive platform to share nursing practice.

Using social media celebrate nursing practice

Celebrating the good stuff is something that isn’t done enough in nursing. Even in the smallest everyday actions there can be something to share, celebrate and be proud of. Social media affords nurses the opportunity to celebrate nursing, to increase the general public’s understanding of nursing and to increase morale in the nursing workforce. Celebrating nursing can be as diverse as sharing a Tweet about an implemented change that worked well to joining and sharing the global celebration that is International Nurses Day. If nurses can start to address these four key areas then perhaps they can really start to leverage social media. It’s time to call nurses to action, to use the technology that is out there and to communicate professionally in the way in which the public are communicating.

Leveraging social media isn’t about learning something new or doing something difficult, it’s about taking our nursing expertise and our professional lives to social media. Nurses need to have the courage to explore and think differently, and social media is a wonderful enabler; it is a global village of expertise at the touch of a button. If nurses can rise to the challenge of unlocking the potential of social media then both the profession and the patients will reap the benefits.

At EAUN(2) a special session will be dedicated to this topic that aims to give people an understanding of how social media is and can be used in nursing and healthcare. For more details, see box at the bottom and the congress website www.EAUN(2).org

Editorial Note: Due to space constraints the reference list has been omitted. Interested readers can email at EUT@euroweb.org for a complete listing.

Monday 27 March

09.45-12.15: 28th International EAUN Meeting: State-of-the-art 7: Unlocking the potential of social media in nursing, Room 1

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