

**BJUI** BAUS Annual Meeting, 25–28 June 2012,  
Glasgow, SECC  
**SUPPLEMENTS**

**Unmoderated Poster Sessions**

Tuesday 26 June & Wednesday 27 June 2012

Unmoderated Poster Session 1

13:15–13:45 Exhibition Hall (Hall 4)

GENERAL UROLOGY

Posters U1–U16

Unmoderated Poster Session 2

13:15–13:45 Exhibition Hall (Hall 4)

HISTORY OF UROLOGY

Posters U17–U42

## Unmoderated Poster Session 1

13:15–13:45 Exhibition Hall (Hall 4)

## GENERAL UROLOGY

## Posters U1–U16

U1

**Magnetic Resonance Imaging (MRI) in the evaluation of Haematospermia – a single centre experience**

*J Keane, G Hann, A Akhtar, A O'Brien, M Williams, M Young*  
Department of Urology, Craigavon Area Hospital, United Kingdom

**Introduction:** Haematospermia is an alarming symptom yet rarely harbours significant systemic disease. The current gold standard for imaging the accessory sex glands is MRI. Most cases are ultimately benign, self-limiting and are infection-related. However, underlying genitourinary malignancy has been reported in 3–4%. If the diagnosis remains unclear it has been suggested that radiological imaging is of benefit. This study reviews our MRI outcome in this condition.

**Methods:** A retrospective study was carried out identifying all men who underwent multiplanar MRI for investigation of haematospermia from April 2005 to August 2011.

**Results:** A total of 69 consecutive patients were identified. The mean age of the cohort was 55 years (range 21–78 years). The most common abnormal MRI finding was of seminal vesicle haemorrhage (15/69) and prostatitis (15/69). Anatomical abnormalities, including prostatic urethral cysts, were found in 6/69 patients. No MRI scan in our series was helpful in diagnosing a genitourinary tumour. Semen culture was sent in 17 cases and 9 of these were positive for infection.

**Conclusion:** Haematospermia in this cohort did not define a clinically significant problem. Most cases are secondary to infection of the accessory sex organs with focused investigation and treatment ensuing. We have found semen culture particularly useful in confirming infectious causes. Most patients can be reassured of the benign self-limiting nature of the condition. Assessment should focus on other symptoms and clinical signs to rule out genitourinary malignancy. The use of MRI should only be considered in this setting after other investigations are complete.

U2

**Iliopsoas abscess with urinary tract involvement: a case series and recommendations for management**  
*S Tadtayev, C King, DC Hanbury*  
Lister Hospital, London, United Kingdom

Iliopsoas abscess (IPA) is an unusual condition in general urological practice. The relationship of urinary tract and IPA is underpinned by anatomical proximity of psoas muscle and urinary system and is two-fold: urinary tract pathology may underlie secondary IPA or IPA caused by non-urological pathology and may lead to ureteric obstruction. The aim of this study was evaluation of management of urologically-relevant IPA.

Keyword search of CT reports performed in a twelve year period yielded 60 IPA cases of various aetiologies. Detailed analysis of imaging, available case notes (9) and pathology reports was undertaken in 14

cases of IPA with an obvious urological cause.

Causes of IPA in our series: perinephric abscess – 5, ureteric and/or staghorn stones – 4, end stage hydronephrosis – 3, atrophic kidney – 1, papillary necrosis – 1. Treatment with antibiotics only was used in 3 cases (2 became persistent, 1 led to empyema). Three cases were drained percutaneously (all more than once, 2 required open drainage) and in primary open fashion in 1 case. In 2 cases abscess discharged itself through the groin (1 recurred). Ureteric stenting was performed twice and nephrostomy once. Resistant organisms were found in 4 cases. Interval nephrectomy was performed in 2 cases. Median length of stay was 42 days. There was one mortality.

IPA has urological aetiology in a quarter of cases. Urological IPA is a highly persistent/recurrent condition and treatment strategy should include compulsory follow up imaging, percutaneous or open drainage whenever possible and attention to the likely primary source.

U3

**Do bladder cancer patients who miss out on the 2 week wait referral process have a worse prognosis?**

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A large number of new patients with bladder cancer are referred via the two week wait (2WW) pathway. This has been

successful in reducing time to treatment. But there are still a significant number of patients who present via other routes. At the extreme end are patients who present directly to emergency departments with frank haematuria or clot retention. We sought to establish whether there is a significant difference in the prognostic indicators of bladder TCC (grade and stage) at presentation between the patients referred by GPs directly to the 2WW haematuria clinic and those presenting as emergencies.

We performed a retrospective cohort study of patients referred to us with haematuria, comparing tumour stage and grade between patients referred as emergencies and those referred to 2WW haematuria clinics. Only data from patients with a diagnosis of TCC were included.

354 patients presented to A&E with frank haematuria from September 2009 to September 2011. 67 had bladder TCC with 51 new diagnoses. Whereas 146 TCCs were diagnosed through 2WW clinic. In the emergency group 55% of tumours were muscle invasive compared to 23% in the clinic group ( $p \leq 0.001$ ). The same was true for tumour grade: 79% of G3 as emergencies versus 54% in clinic group ( $p \leq 0.001$ ).

We found that patients with TCC that presents as an emergency had far worse prognostic indicators at presentation. This supports the need for the inclusion of haematuria in the out of hours urology guidelines within the Acute Oncology Service.

#### U4

**Analysis of 1015 patients with haematuria presenting to a protocol driven clinic. Does the current diagnostic practice need a change?**

*A Gkentzis, S Bluhm, A Thompson, J Husain, M Dauleh, R Manikandan  
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Royal Albert Edward Infirmary, United Kingdom*

**Introduction:** Assessment of patients with haematuria forms a significant proportion of urological workload. It is therefore important to establish the best investigations' protocol to identify significant pathology with consideration of cost.

We report our experience in one-stop haematuria clinic. We also explored a potential protocol change.

**Patients and Methods:** In our unit patients with visible haematuria (VH) and non-visible haematuria (NVH) have flexible cystoscopy, ultrasound scan (US) of kidneys and intravenous urogram (IVU). Those with recurrent VH undergo subsequent computerised tomography urogram (CTU).

We retrospectively reviewed the records of 1172 patients assessed in haematuria clinic over 29 months. Those lost to follow-up or had imaging elsewhere excluded; sample analysed was 1015 patients.

**Results:** NVH: 458, VH: 557. Male: 56.9%, female: 43.1%.

No diagnosis made in 81.4% (NVH) and 65.1% (VH) respectively. Malignancy prevalence was 3.2% in NVH and 15.1% in VH. Commonest diagnosis was UTI (8.5%) in NVH and bladder cancer (13.8%) in VH. 3 renal cell carcinomas and 7 upper urinary tract transitional cell carcinomas (UUT-TCC) identified.

2 UUT-TCC (both > 60 years) diagnosed from IVU only (US reported as normal). No additional diagnosis made by IVU (comparing with US alone) in patients <60 years with NVH ( $n = 220$ ).

59 patients had subsequent CTU; no significant abnormality diagnosed.

**Conclusion:** The outcomes are similar to literature (Khadra et al., *J Urol* 2000;163(2):524-7, Edwards et al. *BJU* 2010;107:247-25). Our data demonstrates no additional benefit of CTU comparing with US and IVU. It also showed no benefit in performing IVU in patients <60 years with NVH.

#### U5

**Is cystoscopy required in the absence of haematuria?**

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General Hospital, Glasgow, United Kingdom*

**Introduction:** Cystoscopy is used for the initial assessment of visible and non-visible haematuria to diagnose bladder cancer. However bladder cancer can present coincidentally with other urological symptoms. We aimed to assess the incidence of bladder tumours in symptomatic patients in the absence of visible and non-visible haematuria.

**Patients and Methods:** Data were collected retrospectively from two hospital units and included all patients who attended diagnostic flexible cystoscopy lists. Patients with either visible or non-visible haematuria were excluded from the cohort. Evaluation included demographics, reason for referral, flexible cystoscopy findings, imaging findings, MSSU results, further interventions and outcome.

**Results:** Out of 500 patients, 43% were male and 57% were female. Age range was 19 to 96 with a median age of 61. Reasons for referral for cystoscopy included storage LUTS (26%), voiding LUTS (22%), mixed LUTS (7%), incontinence (7%), presumed UTI (10%), proven UTI (20%), loin or lower abdominal pain (3%) and other including penile/pelvic pain. 55% had upper tract imaging and 21% had MSSU positive for infection without non-visible haematuria. On flexible cystoscopy, 94% had no bladder pathology whereas 6% had red areas or papillary lesions which were biopsied. Out of these, only 1 patient had bladder cancer which upon resection was G2pTa TCC.

**Conclusion:** The incidence of bladder cancer in the absence of haematuria in symptomatic patients in our study was very low (0.2%). The majority of abnormalities found on cystoscopy were benign in nature. This has service implications as these patients do not need cystoscopic evaluation.

#### U6

**Urology as a specialty – are we becoming a catheter service?**

*JP Noel, LM Wong, N Thiruchelvam  
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**Aim:** Urinary catheter insertion is a skill that all doctors should become proficient in early in their careers. As medicine becomes more sub-specialised, we hypothesize a loss of knowledge and confidence in management of urinary catheters. To evaluate this, we prospectively collected referrals made to Urology in a tertiary hospital, with a focus on management of urinary catheters.

**Method:** Prospective data on all urological referrals to a junior Urology Clinical Fellow over a 3 month period was collected. Basic patient demographics were collected and catheter related referrals were examined in

detail. Complex catheterisation was defined as requiring flexible cystoscopy, urethrogram or suprapubic catheter insertion.

**Results:** A total of 215 patient referrals to one junior Urology Clinical Fellow (on a 1 in 5 rota) were received over a 3 month period. There were 90 (42%) catheter related and 125 (58%) non-catheter related referrals. Nearly half of the catheter related referrals were for catheter insertion ( $n = 42$ , 46.7%) and of these only 8 (19%) (or 7 if you discount the nephrostomy) required complex catheterisation. Of the 42 requests for catheter insertion, only 15 referrers had attempted catheterisation before contacting the urology team.

**Conclusion:** Our study shows a significant portion of urology referrals involves management of urinary catheters. Of concern is the lack of endeavor by treating teams to attempt urethral catheterisation before contacting the urology team. Specialist urology nurses are one solution to lessening the burden of these referrals however improved education beginning with medical students and junior medical staff must also occur.

U7

**Review of epididymo-orchitis management in 3 UK centres: are we still not doing enough?**

*AR Mohee, R Gujadhur, RT Chang, L Bretszajn, M Vannahme, A Khan, R Brierly, I Eardley, S Irving*  
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**Introduction:** Epididymo-orchitis is a common problem in the acute urological setting. This study aimed to retrospectively review epididymo-orchitis treatment within three geographically different UK centres and assess conformity to established guidelines.

**Methods:** A list of patients treated for epididymo-orchitis over an 18-month period was obtained from the coding department in each center. Medical records and electronic records were then reviewed to confirm diagnosis and treatment plan.

**Results:** A total of 371 patients were included in this study cohort (156 were aged < 35 years and 215 were aged > 35 years). In the < 35 years subgroup, urethral swabs were obtained in 7% and urine (PCR) test for Chlamydia were performed in 4%

of patients. Referral to GUM clinic was achieved in 5% patients. 85% of patients had a MSU sent and 5% patients treated were not sensitive to the antibiotics prescribed. The readmission rate was 4%. Scrotal USS were organised as inpatient for 12% and as outpatient in 15% of patients. No formal follow up was organised for 24% of patients. Prostate assessment was done in 70% of the >50 year subgroup. **Conclusions:** Our data demonstrates that compliance with guidelines in the treatment of <35 and >50 years-subgroup in all the 3 UK centres still remains poor. The use of outpatient ultrasound scans simply to confirm diagnosis and the inconsistency in the duration of antibiotics prescribed have significant costs as well as patient morbidity: a more prudent approach is advisable. We also advocate formal prostate assessment in the over 50 year old.

U8

**Catheter associated urinary tract infections (CAUTIs) in a UK teaching hospital: what lessons can we learn?**

*L Clarke, N Fletcher, C Bowman, KJ O'Flynn, J Taylor, DC Shackley*  
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**Introduction:** An estimated 13,000 people die from catheter-related sepsis every year in the US, but there is very little information published in the UK. Pro-rata, the US data would translate to 15 deaths for an average UK trust every year. We describe a trust-wide prevalence audit of catheterised patients in an attempt to quantify reasons for catheterisation and associated problems, within a UK setting. **Methods:** The medical and nursing records of all 752 inpatients were assessed on a single day. Information was collected on indications for catheterisation, type of catheter, duration of catheter and evidence of CAUTI during the admission up to the time of the audit.

**Results:** 17% of all inpatients (126/752) were catheterised. 24% (30/126) had evidence of clinical UTI associated with this catheterisation spell. 41% (52/126) had evidence of SIRS/sepsis where UTI was a possibility. Mean catheter duration was 23 days (range 1–105). The commonest indication was to manage an acutely unwell patient, 37% (46/126); catheters were often left in beyond the time of

stabilisation with little obvious rationale. Post urological surgery only accounted for 4% catheters (5/126). 65% (82/126) had a CSU sent, many unnecessarily. Documentation was very poor with only 38% of patients (48/126) having satisfactory documentation containing all clinically relevant data.

**Discussion:** In-patient urinary catheterisation is a very common procedure with a relatively high risk of causing significant harm. Promoting awareness of these problems, issuing guidance and emphasizing early removal may potentially reduce patient morbidity, length of stay and unnecessary antibiotic prescribing.

U9

**Suprapubic catheterisation in children: an audit of practice at a tertiary centre**

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**Introduction:** Suprapubic catheters (SPC) are commonly used in paediatric urology. We looked to evaluate the outcomes of SPC insertion in paediatric practice in light of the recently published NICE guidelines for adult practice.

**Patients and Methods:** 104 patients who underwent a total of 137 SPC insertions at a single tertiary paediatric urology centre were identified using theatre logs. Data pertaining to patient demographics, indication, comorbidity and complications were retrospectively collected from clinical notes.

**Results:** The median age at insertion was 60 months (0–206; 9 neonates) with a M : F ratio of 106:31. 45% of SPCs were placed as an emergency. The two most common indications were urinary retention of any cause (31%) of which 7 patients had PUV as the primary cause followed by urodynamics (27%). Other indications included neuropathic bladder and continence, perioperative urinary diversion/monitoring and trauma. The 30-day complication rate was 70%. Intra-operative difficulty was documented in 11% with an intraoperative complication rate of 3.6% including localised peritonitis, 2 intraperitoneal urine leaks and 2 posterior bladder wall punctures. No mortality was encountered. SPC complications resulted in 63% re-attendance rate to A&E with 35%

of those patients requiring formal readmission and 23% of cases required further GA procedures directly relating to their SPC.

**Conclusions:** SPC insertion is a procedure that can carry high risk and blind insertion should not be used. This audit highlights the high morbidity associated with SPC use in the paediatric population and paediatric specific guidelines should be in place to try and reduce such problems.

U10

**The Role of Micturating Cystourethrogram (MCUG) in the evaluation of recurrent urinary tract infections following renal transplantation**

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London, United Kingdom*

**Objective:** Urinary tract infections (UTIs) are the most common infectious complication after kidney transplantation. Recurrent UTIs can contribute to increased morbidity and may also be associated with graft loss and mortality. There appears to be insufficient data regarding the association between vesicoureteric reflux and recurrent UTIs. In this study, we evaluate the impact of micturating cystourethrogram on the investigation scheme in renal transplant patients with recurrent UTIs.

**Methods:** We retrospectively reviewed kidney transplant patients with recurrent UTIs between November 2006 and October 2011. A total of 57 patients were identified who were investigated with MCUG.

**Results:** In all, 50 women and 7 men were assessed (Mean age 42 years, range 19–65). Of the 57 patients, 43 (75%) patients had transplant kidney reflux whereas 17 (30%) patients had reflux into the native ureters. In addition, 13 (23%) patients had significant residual urine. Of the 17 patients with native reflux, 7 had native nephrectomy, 5 had subureteral injection of dextranomer/hyaluronic acid copolymer (Deflux); and in two patients native ureteral ligation was performed by an open approach. Majority of the remaining patients were managed conservatively with prophylactic antibiotics.

**Conclusion:** MCUG is an important investigation and it helps to identify patients with significant reflux especially into the native ureters who can then be

treated with various surgical interventions. This potentially reduces the risk of graft dysfunction and patient morbidity.

U11

**Adult experience of circumcision under local anaesthetic defies consultant beliefs**  
*RA Crosbie, M Hilmy, IB Dunn  
Monklands Hospital, Airdrie, United Kingdom*

**Introduction:** Circumcision is performed under local, regional or general anaesthetic. Current practice in Scotland for adults favours general anaesthesia. We offer circumcision under local anaesthetic to most patients. We audited their experience, as well as the attitudes and current practice of consultant urologists in Scotland with regards to anaesthesia for circumcision.

**Patients and Methods:** We conducted a prospective audit on the day of surgery for consecutive patients undergoing local anaesthetic circumcision. A questionnaire was used to assess peri-operative factors such as anxiety, pain, satisfaction and future recommendation of local anaesthetic circumcision. Consultant urologists in Scotland were additionally sent a questionnaire enquiring about individual anaesthetic preferences for adult circumcision.

**Result:** Completed questionnaires were returned by 63 patients with 17 (27%) experiencing some pain during the procedure (range 1–7/10, mean 3.4). All patients reported satisfaction with their choice of anaesthetic and would recommend the same to a friend. 17/26 (65%) of consultant urologists in Scotland don't offer LA circumcision, believing both that it induces severe discomfort, and that patients wish general anaesthesia.

**Conclusion:** Local anaesthetic circumcision avoids the need for pre-assessment, and offers potential cost savings. It is acceptable to patients. Approximately a quarter will experience mild discomfort during administration. Our results challenge the beliefs of a substantial number of consultant urologists, that LA circumcision is unacceptable to patients.

U12

**Parental perception of acute scrotal pain in children**

*SS Ubee, V Hopkinson, SJ Srirangam  
Royal Blackburn Hospital, United Kingdom*

**Introduction:** Acute scrotal pain (ASP) in children represents an emergency and urgent exploration is mandatory to exclude testicular torsion. Delayed intervention may result in a non-viable testis, with salvage rates highest in those undergoing surgical correction < 6 hours from onset of pain. Parental awareness of the sequelae of ASP may be a significant factor in delayed presentation. We examine awareness among parents of the implications of ASP in children.

**Patients and Methods:** Parents accompanying children (up to age of 16) presenting with ASP were prospectively asked to complete a questionnaire.

**Results:** Over 2 years, 72 patients underwent emergency scrotal exploration for ASP. Of these 49 were <16 years of age and eligible for analysis. Mean age was 10.7 years (range 2–16). 11 patients were found to have testicular torsion at exploration, with a non-viable testis in 3 cases. The majority of parents questioned (n = 37, 76%) did not know the implication of ASP (primarily non-viable testis) prior to seeing a health professional. Most (n = 35, 71%) presented >6 hours after onset of pain, and two-thirds of parents wished that they had attended sooner. Parents overwhelmingly (96%) felt that there ought to be increased public awareness of the condition, with an importance rating of 9.3/10 for this issue. Schools and GP surgeries were identified as priorities for dissemination of information.

**Conclusion:** There is an apparent lack of awareness among parents of the implications of ASP in children. There is urgent need to raise awareness of this potentially serious condition in the wider community.

U13

**Management of post orchidectomy stage I classical seminoma: 10 year outcome data of a regional cancer unit**

*J McPartlin, N Brown, AJ Birtle  
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**Introduction:** Stage I classical seminoma has a 95% 5 yr OS. Post-orchidectomy

treatment options include para-aortic radiotherapy, single agent carboplatin or active surveillance. This retrospective study reviewed outcomes over a 10 year period in a regional cancer unit.

**Patients and methods:** 82 consecutive patients seen in oncology clinics with local pathology review post orchidectomy from January 2000 to December 2010 were identified. Initial risk factors, treatment received and post treatment response were recorded and relapse free and overall survival calculated.

**Results:** Adjuvant radiotherapy was given to 50 patients (61.0%), adjuvant chemotherapy to 28 (34.1%) and active surveillance to 4 (4.9%). Two year RFS by group was 96%, 89.3% and 100% and five year RFS 94%, 94.0% and 75%. Seven patients relapsed with one dying despite third line treatment. CSS was 98.8%, OS 97.6%. Tumour size and rete testis invasion was documented in 48 (58.5%). Management and outcome stratified by risk factor are shown below.

Table for U13

Risk factor	Management			Relapse rate
	Surveillance	Adj Chemo	Adj XRT	
None (14 patients)	14.20%	42.90%	42.90%	0.00%
One (24)	4.20%	41.60%	54.20%	13.60%
Two (12)	0.00%	66.66%	33.33%	16.66%

**Conclusion:** This review's outcomes correspond with published data. Patients who received adjuvant treatment have an increased 5 yr RFS compared to active surveillance, albeit with small numbers in this group. Even with relapse outcome was excellent with 98.8% overall CSS. The absence of risk factors appears to reduce the rate of relapse and should guide treatment decisions. The majority of radiotherapy performed (68%) was in the first five years of the study period and reflects older practice. A network wide audit is ongoing and is expected to show increasing use of surveillance.

**U14**  
**Histological outcomes of orchidectomy performed for clinically and radiologically suspicious testicular pathology: a 15 year review**

*JA Harikrishnan, H Khan, K Mir*  
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**Introduction:** The incidence of testicular cancer is rising. Its diagnosis is based on clinical, radiological and biochemical investigation. Ultrasound has an important role in the diagnosis of testicular tumours. Despite its high accuracy some cases are reported as suspicious but not diagnostic for tumour. Our aim was to review the histological outcome of orchidectomies performed for these suspicious scans.  
**Method:** A retrospective review was performed of all patients undergoing orchidectomy within a large teaching hospital between 1995 and 2010. Data was collected on age, radiological investigation, procedure performed, tumour markers collected and final pathology results.

**Results:** A total of 368 orchidectomies were performed over a 15-year period. 89% of patients had an USS that was diagnostic for testicular tumour, 11% were only suspicious. Forty-one orchidectomies were performed following suspicious ultrasound scans. In the group there were 30 orchidectomies performed for benign pathology and 11 performed for malignant tumours. In patients with benign pathology the mean age was 48.8 years (range 16–80 years). In the group with malignant pathology the mean age was 36.7 (range 19–61). The range of pathology can be seen in the figure below.

Table for U14

Benign pathology	Malignant pathology
Normal testicle (2)	Seminoma pT1 (6)
Atrophy (8)	Seminoma pT2 (2)
Epididymo-orchitis (5)	Mixed embryonal carcinoma and teratoma pT2 (1)
Xanthogranulomatous process (1)	Malignant teratoma pT2 (1)
Necrotising granulomatous process (1)	Differentiated teratoma (1)
Hydrocele and epididymal abscess (1)	
Haemorrhagic testicular tissue (2)	
Infarction (4)	
Spindle cell tumour (1)	
Adenomatoid tumour (1)	
Spermatic granuloma (1)	
Intra-testicular spermatocele (1)	
Cavernous haemangioma (1)	
Unclear histology, likely benign (1)	

**Discussion:** Orchidectomy should not be undertaken lightly. Patients that present with testicular mass who have radiologically suspicious ultrasound scans often have benign testicular pathology. This is more common in the higher age group. It is important to recognise this as in some cases the testicle could have been spared following frozen section or further imaging.

**U15**  
**The pocket ultrasound in urological clinical practice**  
*GP Pace, G Bozzini, S Picozzi, L Carmignani*  
*San Donato Milanese Hospital, Italy*

**Introduction:** To evaluate whether an ultra-smart ultrasound (US) allows to facilitate an immediate clinical decision making in urological emergencies.  
**Patients and Methods:** From May to September 2011, 105 patients, mean age 62 years, hospitalized or in the emergency unit, have been evaluated for an urological emergency by using the pocket US followed by another appropriate diagnostic test to verify the exact diagnosis.  
**Results:** Urinary retention was diagnosed in 10 patients immediately managed through catheter positioning. Of 48 patients with haematuria, 19 had an immediate diagnosis: 16 with an ultrasonography

evidence of bladder tumor were directly treated by transurethral resection of bladder, 1 with kidney urolithiasis underwent extracorporeal shock wave lithotripsy (ESWL), 1 case of kidney tumor and 1 of ureteric stent were also detected. Of 30 patients who were referred with low urinary tract symptoms (LUTS), 14 showed a high post-micturation residual and 2 were affected by bladder diverticuli. The last 14 needed further instrumental evaluation to reach a definitive diagnosis. Of 17 patients suffering from acute flank pain, 1 had a kidney abscess, 5 a high/medium grade of hydronephrosis. Of 11 diagnosed with ultrasonographic evidence of urolithiasis, an ESWL has been suggested when appropriate. A conclusive diagnosis by using the pocket ultrasound has been reached in 62 (59%) cases; in 43 patients (41%) (29 with haematuria and 14 with LUTS) an additional investigation was needed. **Conclusions:** The pocket ultrasound should be regarded as an 'extension of physical examination' allowing, in several urologic emergencies, a speedier diagnosis and treatment.

U16

**A retrospective review of acute scrotal pain requiring surgical exploration over a 10 year period: Implications for greater use of Doppler ultrasound**

*A Pai, A Campbell, PJ Charlesworth, A Jones, PVS Kumar  
Royal Berkshire NHS Foundation Trust,  
United Kingdom*

**Introduction:** We studied the aetiology of acute scrotal pain to try and establish

whether an association existed between presentation time, surgical findings and age. Further, we assessed availability of Doppler ultrasonography at presentation and whether it could have altered the management.

**Patients and Methods:** A retrospective case note review of 230 patients who had scrotal exploration for acute scrotum from 1999 to 2008. Data collected included findings at surgical exploration, patient age, orchidectomy rate, duration of symptoms and availability of urgent imaging. This cohort was divided into 3 categories; 1–11 years (n = 68), 12–19 years (n = 112) and >20 years (n = 50).

**Results:** The patients ranged from fourteen months to sixty-six years old; median age of fourteen years.

Incidence of positive exploration (testicular torsion) in the 1–11 age group (6%) was

lower than in the 11–19 and >20 age groups (60%, 42%, p < 0.0001).

In the 1–11 group, testicular torsions presented earlier than negative explorations (15 hours vs 41 hours, p < 0.03). In this group, 57% of negative explorations occurred in 'working hours' when urgent ultrasound would have been available.

In patients with testicular torsion (n = 93), those requiring orchidectomy 20% (n = 19), presented later than those with a viable testicle (49 hours vs 12 hours, p < 0.0001).

**Conclusion:** It is justified to urgently surgically explore adolescent and adult patients with acute scrotal pain suspicious of testicular torsion. However, in the 1–11 years age group, sixteen negative explorations were performed for every positive one. Increased use of ultrasonography and consideration of time to presentation may significantly reduce this negative exploration rate.

Table 1 for U16: Findings at surgical exploration for each age group

	1 to 11 years	12 to 19 years	>20 years
Testicular torsion	4	68	21
Torsion testicular appendage	48	28	3
Epididymoorchitis	13	12	21
No Pathology	3	4	3
Other	0	0	2

# BJUI

Tuesday 26 June & Wednesday 27  
June 2012

## SUPPLEMENTS

### Unmoderated Poster Session 2 13:15–13:45 Exhibition Hall (Hall 4) HISTORY OF UROLOGY Posters U17–U42

U17

**The evolution and development of male urinary incontinence management**  
*RCR Nayar, IP Wharton*  
*City Hospital Birmingham, United Kingdom*

Although, in recent years, post-prostatectomy urinary leakage has highlighted the management of male stress urinary incontinence, Egyptian manuscripts from 2000BC detailed its existence. Despite receptacles for urine collection being described, it was not until 1564AD that Paré, a French surgeon, published illustrations of a male urinal. Hildanus (1560–1634) then created a modified urinal for continuous containment consisting of a pig's bladder strapped over the penis. Leakage containment then evolved to controlled voiding when Heister (1683–1758) described, first a penile clamp, and then a belt for perineal compression of the bulbar urethra which was removed at the time of voiding. Various techniques of external urethral compression were subsequently published, with the idea being revived as late as 1960.

The first artificial urinary sphincter was created by Foley (1947), who is best known for his transurethral balloon catheter. It consisted of an inflatable circular cuff which was applied around skin-covered urethra and a pneumatic piston. This design subsequently evolved and by the 1960s operations with completely implantable devices were being undertaken. In 1972, Brantley Scott developed the artificial sphincter that became the template for the currently used AMS 800™ device. It

consisted of an inflatable cuff, fluid reservoir, and inflation/deflation pumps. Attention then turned to obtaining spontaneous voiding with continence. Despite Vergés-Flaqué and Lowsley (1951) having limited success with their bulbar urethra sling created from sphincter ani muscle, Kaufman (1970) investigated urethral compression and described three different anti-incontinence procedures. From this work, needle suspension and then synthetic bulbar urethral slings were developed.

U18

**A tribute to the life and accomplishments of Mathieu Jaboulay**  
*F Khan, S Sriprasad, IK Dickinson*  
*Darent Valley Hospital, Dartford, United Kingdom*

**Introduction:** Mathieu Jaboulay, (1860–1913), was a renowned French surgeon, who greatly changed the paradigm of surgery in his day. We observe the methods he used to approach urological surgery, and how his procedures are the basis of ones' that are conducted today.

**Materials and Methods:** Archives at the Royal Society of Medicine and Wellcome History of Medicine libraries were searched for publications and records relating to the life and surgical achievements of Mathieu Jaboulay. Obituaries and correspondences were also used.

**Results:** Among his surgical accomplishments, Jaboulay first described side to side gastroduodenostomy; he also invented 'Jaboulay's button', an alternative

to sutures, for lateral intestinal anastomosis, and furthermore was the first to perform xenotransplantation using pig and goats' kidneys in humans. With respect to urological surgery, he first described the excision eversion procedure for the management of hydroceles, a technique that was later described by Karl Winkelmann, hence the Jaboulay's procedure, also referred to as the Winkelmann's method, in Germany. Other successors at the time include, E. Wyllys Andrews of Northwestern Medical University, who in 1908, introduced the less commonly used 'bottle operation', involving complete eversion of the sac with a high anterior cord incision without use of sutures.

**Conclusion:** Mathieu Jaboulay, an innovator of his time, produced invaluable principles to surgery. His method for hydrocele repair, serves as the most common scrotal day-case procedure we perform today.

U19

**Al Zahrawi: the Sheikh of urological surgery of the tenth century**  
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**Introduction:** Abu al-Qasim Khalaf ibn al-Abbas Al-Zahrawi, also known as Albucasis, was a surgeon, who lived in Andalusia, Spain from 936–1013 AD. We observe his findings in his book, the *Al Tasrif*, which contains guidelines for surgery that are still referred to today.

**Methods:** The Al Tasrif along with other archives provided by the Wellcome Library and the Royal Society of Medicine were reviewed.

**Results:** The Al Tasrif emphasises a comprehensive set of guidelines on the practices of surgery, medicine, otolaryngology, obstetrics, and orthopedics. With respect to urology, Albucasis describes the following. For Urinary retention, Albucasis describes a straight like catheter made from silver and lubricated with egg white, unlike Galen's S-shaped catheter. For bladder irrigation and in treating interstitial cystitis; unlike the predecessors, Celsus and Paulus, Albucasis describes in great detail and with many illustrations, the zaraqqa syringe, comprised of an elongated, silver tube containing three holes in it, used for both irrigation and bladder aspiration. Albucasis observed previous works, and concluded that the best method of circumcision was the use of scissors and thread ligature. With respect to renal tract calculi, Al Tasrif states an early use of lithotomy. Straight forceps known as Al Kalaleeb were implemented to break down bladder calculi via an incision through the perineum. Al Mishaab drills were gently applied to break down urethral calculi.

**Conclusion:** Albucasis' contributions to surgery proved him to be an influence to the modern perspective of surgical procedure that succeeded him 1000 years after.

U20

**The evolution of the condom: goats bladder to rubber latex**

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**Introduction and Objectives:** Condoms have been a subject of curiosity throughout history. The idea of safer sex has been explored in ancient and modern history, and has been used to prevent venereal diseases. **Materials and Methods:** A historical and medical account of condoms using primary and secondary sources as well as using the library and the internet.

**Results:** Resources show that the first account of condom use is that of King Minos of Crete. Pasiphae, his wife, employed a goats bladder in the vagina so that King Minos would not be able to harm

her as his semen was said to contain 'scorpions and serpents' that killed his mistresses. To Egyptians, condom-like glans caps were dyed in different colours to distinguish between different classes of people and to protect themselves against bilharzia. Charles Goodyear, the tyre maker, utilized vulcanization, the process of transforming rubber into malleable structures, to produce latex condoms. The Ancient Romans used the bladders of animals to protect the woman; they were worn not to prevent pregnancy but to prevent contraction of venereal diseases. Causes leading to the use of condoms have been prevalent as HIV grows to kill significant populations all over the world in the 20th and 21st centuries.

**Conclusion:** What we have to appreciate is how primitive ideas turned to an object that is used globally with a forecast estimated at 18 billion condoms to be used in the year 2015 alone.

U21

**Urological practices in the Ancient Americas**

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**Introduction and Objectives:** The Meso-American (Aztecs, Mayans, Olmecs, and Toltecs) and Pre-Columbian civilizations (Incas) were among those who were greatly impacted by the arrival of the Spanish conquistadors in the 1500s. Herbal application was an essential practice of Ancient American medicine in terms of Urology, influenced by the advent of the Spanish.

**Materials and Methods:** Comprehensive research utilizing sources such as the Florentine and Matritense Codices, journals, botanical databases, available at the Wellcome Library, British Library and Royal Society of Medicine, London.

**Results:** Cacao plants, were used to break down renal stones, along with Jade ('Piedra de Ijada' or Lapis Nephriticus), used by Mayans to expel renal calculi. With fairly primitive, but effective urological knowledge of pyuria, renal colic, and renal stones, the Meso-Americans (specifically the Aztecs) developed a way (using a stick like baton which was advanced into the urethra) to meliorate symptoms of urethral strictures and bladder outlet obstruction.

Diuresis was regulated by the Aztecs by drinking Aitztoli gravy, which would also help to remove any residue of renal calculi. The Pre-Columbian Incas used an infamous herb known as Chanca piedra ('Stone breaker') for renal stones, prostatitis, and lower urinary tract infections. Trials indicate that Chanca piedra is a competitive inhibitor to formation of calcium oxalate crystals and the formation of matrix calculi (experimentation on rats).

**Conclusion:** Use of herbs is relatively outdated, but it demonstrates that even in premature use of medicine, a unique way of counteracting urological diseases is present; differing from our Hippocratic viewpoint today.

U22

**Ronald Ogier Ward: urologist, military hero & first President of BAUS**

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Ronald Ogier Ward was born in London on 6th March 1886. His father, Allan Ogier Ward and grandfather, Thomas Ogier Ward were also doctors and both had experienced their own wartime adventures.

As a student at Bart's, he joined the Honourable Artillery Company. He volunteered to serve with a British Ambulance Unit in the Serbo-Turkish War (1912-1913). During the First World War he commanded a gun battery with the Honourable Artillery Company. In March 1918 he saved his guns from German capture preventing a breakthrough of the British line. For his bravery he won the Military Cross and Distinguished Service Order.

After the War he worked at Bart's and then, developing an interest in Urology, joined the staff of St Peters Hospital for the Stone. He was known as a careful surgeon and meticulous clinician. He was made president of the urology section of the Royal Society of Medicine in 1935. Too old to fight in The Second World War, he joined the Royal Army Medical Corps commanding a surgical division in France. He was awarded the OBE for his services during the Dunkirk evacuation. Ward took part in discussions on the Government's White Paper on the new National Health Service, and became concerned that there was no organisation in Britain to represent Urology. He then

became the driving force behind the creation of BAUS.

On March 17th 1945 Ronald Ogier Ward was elected first President of the new British Association of Urological Surgeons. Ward died on Palm Sunday 1971.

U23

**Professor Gustav Simon (1824–1876) and the first successful nephrectomy**

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**Introduction:** On August 2nd 1869, Professor Gustav Simon performed the first successful nephrectomy on Margaretha Kleb, a 46 year old German washerwoman. We examine Professor Simon's contribution to urology and his accomplishment of the first planned nephrectomy.

**Methods:** Archives search at the British library. Web-based literature search on Gustav Simon.

**Results:** Gustav Simon, Professor of surgery at Heidelberg, an expert on vesicovaginal fistulae, was asked to treat Magaretha Kleb who suffered from a uretovaginal fistula post ovariectomy. Due to her poor quality of life, she was desperate for a cure. After four unsuccessful operations, Gustav Simon conceived the idea of a nephrectomy.

Professor Simon performed the operation on thirty dogs, establishing that the procedure was compatible with health. Additionally, in the postmortem room, he developed techniques including peritoneal reflection and renal pedicle ligation. Despite public criticism and ethical protests from clergy, Professor Simon invited his colleagues to attend the operation, which he performed under chloroform anaesthesia. The procedure went as planned, lasting forty minutes, with a reported 50 ml blood loss.

Margaretha Kleb's convalescence was complicated by ileus, wound infection and pneumonia but the fistula remained fully closed. The wound took months to fully heal, but long before this, the patient returned to normal health.

**Conclusion:** Gustav Simon published his knowledge of the operation in the 1871 text 'Surgery of the Kidney'. He made further contributions to operations for hydronephrosis. His work acted as the catalyst for other surgeons; within 15 years,

collective reviews of hundreds of nephrectomies were written.

U24

**De-circumcising the past: Aulus Cornelius Celsus's contribution to epispasm during the Hellenistic period (323 BCE–146 BCE)**

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**Introduction & Objectives:** The Hellenistic period marked the transition between the Greek classical era and the Roman Empire. Both celebrated the nude form in art and sport. However, the baring of the glans penis in the circumcised male was viewed with distaste and considered indecent. Through his treatise 'De medicina', we re-live the social and historical development of epispasm, the surgical technique for de-circumcision by Aulus Cornelius Celsus.

**Material & Methods:** Time related sources in medical and historical literature were reviewed, including 'De medicina,' by first century Greek encyclopedist Aulus Cornelius Celsus.

**Results:** Although many rudimentary techniques were used to pull and tie excess preputial skin over the glans penis, Celsus described two permanent surgical techniques to de-circumcise a male. The first involves stretching the prepuce around the glans and tying it in position. A circumferential incision made over the skin distal to the pubis allowed the prepuce to slide forward towards the tie. The space between the incisions are bandaged and 'fill with flesh.' The second technique involved raising the prepuce from the underlying penis by circumferentially incising around the glans. Once freed, the prepuce is stripped back to the pubis and then stretched forward beyond the glans where it is tied. Bandages are applied and the penis kept cold to allow for healing.

**Conclusion:** Epispasm by Celsus was unique during the Hellenistic period, when circumcision was considered social stigma. These procedures influence urological practice to date, and hold many parallels to modern day reconstruction of the prepuce.

U25

**The Surgical Revolution after Lord Joseph Lister**

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**Introduction:** Lord Lister was known as the 'Father of antiseptic surgery'. The year 2012 marks the centenary of his death. His lifetime work is discussed, which was central to the surgical revolution of the 19th century.

**Method and Materials:** Information is based on research from the archives at King's, the Royal Society of Medicine, the Royal College of Surgeons, the Wellcome Library and Lister Institute.

**Results:** Before Lister in the middle of the 19th century, surgery was limited by the slough of sepsis and abdominal surgery was banned. Lister's antiseptic techniques allowed the development of surgery in these vital areas.

He used carbolic acid to clean the wound and the surgeon's hands; the wound was covered with carbolic acid covered lint. He practiced preparing the operating theatre with a carbolic spray and soaking the instruments and surgical towels in carbolic solution.

Lister's career progressed from University College, to Edinburgh, Glasgow, and finally Kings as Professor of Clinical Surgery in 1877. Lister performed an open procedure on a transverse fracture of the patella. The case was successful; his reputation was made and led to the rapid increase in the use of antiseptics. The mortality of his patients dropped dramatically indicating the ability to perform open surgery safely had now been achieved. Open surgery for bladder calculi was now possible.

**Conclusion:** Lord Moynihan stated, 'Lord Lister was the greatest material benefactor the world has ever known. He saved more lives than all the wars and all the ages have thrown away'.

U26

**A bibliometric analysis of urological oncology research output over 55 years**

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**Introduction:** The three commonest malignancies in urology are prostate, renal and bladder cancer. These three malignancies comprise of the majority of referrals to urological oncology units. The Impact Factor (IF) and Eigenfactor (EF) are implied as proxy indicators of journal quality. IF relates to the average number of citations to articles published, whereas the EF is a measure of how likely a journal is to be used. The aim of this paper is to analyse the research output of these 3 malignancies since 1955 using large scale data analysis.

**Method:** All the relevant data was retrieved from the Web of Science (WOS) science citation database. The relevant MESH headings were used to extract data on each of the malignancies.

**Results:** Over the past 55 years there have been a total of 130,290 papers published on these malignancies; 60,893 on prostate cancer, 44,843 on kidney cancer and 24,554 on bladder cancer respectively. The USA, Japan, UK and Germany had the highest levels of research output. However, Sweden, Iceland, Denmark, Norway and Switzerland had the highest research output in terms of the number of publications per 1 million population. These countries also had a higher health expenditure expressed as a percentage of GDP. Journals publishing most prolifically on kidney cancer had superior EF scores. Bladder cancer remains underrepresented relative to its associated disease burden.

**Conclusion:** Globally, the research output of the commonest urological malignancies continues to increase annually. Europe continues to have a high research output relative to its population and healthcare funding.

U27

**Ireland's contribution the evolution of open prostatic surgery**

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**Introduction:** Ireland, a small island nation on western shores of Europe has a tradition of having a significant impact on the education and development of surgical procedures in urology. This paper highlights the impact that both Sir Peter Freyer (1851–1921) and Sir Terence Millin (1903–1980) have had on the development of open prostatic surgery.

**Methods:** We reviewed the publications of both of these surgeons on open prostatic surgery.

**Results:** In 1901, Freyer published his first 4 cases of enucleative prostatectomy using a transvesical approach in the BMJ. Later, in 1912, Freyer published his first 1000 cases in the BMJ with a mortality rate of only 3% for his final 200 cases. 34 years later, in 1946, Millin published his series of prostatectomies in the Lancet, however he described a retropubic approach.

**Conclusion:** These 2 Irish urological surgeons have pioneered the development of prostatic surgery in the 20th century. Millin's procedure continues to be employed in current urological practice.

U28

**Joaquin Maria Albarran Y Dominguez: a Cuban orphan to a Noble prize nominated Urologist**

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**Introduction:** It is 100 years since Joaquin Albarran (1860–1912) passed away. We present a historical note about this eminent Urologist who contributed hugely to our speciality.

**Material & Methods:** A review of the literature was done regarding Albarran's life, medical contributions and inventions.

**Results:** Joaquin Albarran, born in Cuba in 1860, was orphaned at 9 years of age. He was adopted by a Spanish surgeon and moved to Barcelona. He completed his degree of Doctor of Medicine from Madrid and was awarded a Gold Medal for his thesis on tuberculosis, ironically the disease

that he himself eventually died from. He moved to Paris and initially worked as a histologist and microbiologist. He became a surgical intern in 1884 and worked in famous Parisian hospitals. He is most popularly known for Albarran's bridge, used until modern times for intravesical and ureteric access. Other eponymous contributions include Albarran's nail, Albarran's test (a test for renal insufficiency), Albarran–Ormond syndrome (Idiopathic RPF), Albarran's sign (bleeding from renal pelvic tumour on injecting fluid into pelvis) and Albarran's glands (submucosal glands in the subcervical region of the prostate gland). He performed the first perineal prostatectomy in France. He was respected for his work on renal and testicular tumours as well as his treatises on nephritis, stone related ureteric obstruction and acute urinary retention. He was nominated for Nobel prize in 1912, the year of his death at a young age of 52.

**Conclusions:** Joaquin Albarran's academic and clinical achievements are exemplary for modern day Urologists.

U29

**The history of reporting of male genital self-mutilation and its association with psychotic illness**S Howles, A Birnie, M Tempest, H Tempest  
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**Introduction:** Male genital self-mutilation (GSM), although rare, has long been reported appearing in Greek mythology as well as being referenced in English literature from as early as 1901. Our recent experiences suggest that not all patients are suffering from a psychotic illness at the time of self-injury. We reviewed the literature to ascertain the frequency of reporting of male GSM and the reported incidence of psychotic illness in these patients.

**Methods:** Pubmed was searched using the terms "Genital Mutilation" OR "Self-castration". All case reports in English were reviewed and the date and psychiatric diagnosis recorded. Using the information available, patients were classified using the Department of Health Mental Health Clusters as suffering from either a non-psychotic, psychotic or organic condition at the time of self-harm.

**Results:** Reporting over time is shown in Table 1. Fifty percent of patients were reported to be suffering from a psychotic episode at the time of self-injury. Forty-nine percent of patients were reported to be non-psychotic, these cases included those who were suffering from depression (7%) or experiencing gender dysphoria (6%). One patient (1%) was suffering from an organic mental health condition.

Table 1 for U29: Frequency of reported cases of male GSM

Decade	Number of Cases of Genital Self-mutilation Recorded
1940–1949	1
1950–1959	4
1960–1969	5
1970–1979	7
1980–1989	12
1990–1999	26
2000–2010	26

**Conclusion:** Reports of cases of male GSM are increasing over time. In these reports, only 50% of patients were suffering from a psychiatric disorder causing psychosis at the time of self-harm. When treating patients presenting with GSM we must take a multidisciplinary approach and be sensitive to their psychiatric as well as their urological needs.

U30

**History of scientific peer review in medicine, medical publications and urology journals**

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**Introduction:** Scientific peer review is defined as the evaluation of assessments and findings for competence, significance, and originality by qualified experts.

**Materials and Methods:** We revisit the history of this integral process of modern day scientific literature publications.

**Results:** First description of a peer-review process is by Al Rahwi (854–931) in his book 'Ethics of the Physician' where he described the need for duplicate notes of the patient's condition for later assessment by peers. There is subsequent evidence of

peer review in eleventh century Arab medicine. Henry Oldenburg introduced peer review in 1665 when he became editor of the Royal Society of London scientific publication 'Philosophical Transactions'. In 1731 the Royal Society of Edinburgh published 'Medical Essays and Observations', the first peer-reviewed medical journal. There was an increase in the publication space in 1800s and peer review became synonymous to editorial opinion. Copying and distributing manuscripts for review was a challenge but invention of the typewriter (1890's), photocopier (1950's) and the internet and email (1980's) changed the scenario. British medical journal had peer review in place by 1893. British Journal of Urology, The Journal of Urology and European Urology adopted peer review in different years and they currently are the best sources of peer reviewed literature in Urology.

**Conclusion:** However modern modern-day practice might seem, peer review has its roots as early as 9th century. Peer review in modern day scientific publications guarantees the quality and authenticity of publications and helps recognise top researchers who have most peer reviewed publications.

U31

**Dr. John Macintyre (1857–1928) – an unknown 'Spark' in the field of uro-radiology**

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**Introduction:** In 1896, Dr. John Macintyre established the world's first department of radiology at the Glasgow Royal Infirmary. Through the application of roentgenology in diagnostic medicine, he produced the first images of renal calculi heralding a transformation in its diagnosis. This pictorial examination examines the historical contribution Dr. Macintyre made to urology and impact his images had on the management of nephrolithiasis.

**Methods:** Time related sources and historical manuscripts obtained from the archives of the British Library, the Royal College of Radiologists, London and the University of Glasgow, Scotland were evaluated.

**Results:** Having originally trained as an electrical engineer, Macintyre graduated from medicine in 1882 from Glasgow University. His background allowed him to exploit the potentials of new technologies leading him to establish the 'Department for the Application of Medical Electricity' in 1887.

He developed on the pioneering work on X-rays by Wilhelm Rontgen, installing one of the first X-ray machines in his laboratory. With this, he produced the first diagnostic radiographic images of renal calculi using a 12-minute exposure time. His findings of stone were verified during subsequent open operation in 1896. Macintyre's work led to the popularisation of radiography and with the development of his purpose built X-ray unit in 1902; he found it difficult to cope with the demands.

**Conclusions:** Modern urology owes much to the advances in radiology during the era of Dr. John Macintyre. His work paralleled a transformation in the management of nephrolithiasis from blinding 'cutting for stone' to image directed surgery.

U32

**The history of female urologists**

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**Introduction:** Urology has previously been considered a male dominated medical specialty. However the number of female urologists is slowly increasing over time. We reviewed the history of the rise of female urologists and pioneers who have made this possible.

**Materials & Methods:** Data was collected from the Royal College of Surgeons, personal records and a Medline-search using the terms 'women' or 'female' and 'urologist'.

**Results:** Pioneering females are described below:

Table for U32

Woman	Year	Summary
Emily Catherine Lewis	1919	Became 2nd female fellow of RCSEng and later founded urology department at Royal Free Hospital
Helen Wingate	1945	1 of 2 female founder members registered when BAUS was founded and became Associate Specialist (Glasgow) and Consultant Urologist & General Surgeon at Redlands Hospital for women
Elizabeth Pauline Pickett	1962	1st board certified female urologist in USA
Christina Hill	1975	1st reported woman urologist in Canada
Christine Mary Evans	1979	Appointed as Consultant urologist/transplant surgeon in Liverpool having been the 1st specifically trained female urologist in the UK. Later was on BAUS council twice, UROLINK chairman & TV presenter. Awarded St Peter's medal.
Helen O'Connell	1993	1st reported female urologist in Australia. Executive of USANZ, specialty elected councillor on Royal Australian College of Surgeons's Board of Directors & Clinical Associate Prof (Surgery), Melbourne

In the UK the percentage of female urological consultants has increased from 1.8% in 1990 to 6.4% in 2010.

**Conclusion:** Several inspirational women have been influential in paving the way for women to be part of the urological community of today.

### U33

#### 'From bats and ships to prostate and kidneys' A brief history of ultrasound in urology

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**Introduction:** Ultrasound (US) technology has upgraded its position within the armamentarium of urologists, not just for diagnosis, but also for interventions. History of US is even more exciting as the technology that was developed for ships has permeated into medicine.

**Materials and Methods:** Literature review was carried out regarding its evolution.

Rare photographs are presented.

**Discussion:** The history can be traced to an Italian priest Spallanzani (1794) who demonstrated bats navigate in the dark with high-frequency inaudible sound. Curie (1881) established a connection between electricity, pressure on crystalline material creating the breakthrough for transducer. In 1914, with Titanic sinking, Langevin invented the hydrophone to detect icebergs! SONAR was used to detect submarines in WWI. US in medicine started initially with

applications in therapy rather than diagnosis! Dussik (1930's), a psychiatrist used hyperphonography to diagnose brain tumours. In the 1960's, Holmes was the first to image a dog bladder using a B-29 gun turret! In 1969, Holm (urologist), performed ultrasonically-guided puncture of a renal cyst and in 1973 developed a transurethral scanner. In 1963, Takahashi described TRUS for prostate, a technique previously employed for rectal pathology. Watanabe (1976) first obtained spectrogram of Doppler from the renal vessels. Mulvaney (1953) reported fragmentation of calculi by ultrasound paving the way for lithotripsy. Kurth (1977) reported the first use of ultrasonic lithotripsy. Lynn (1942) introduced the concept of HIFU.

**Conclusion:** The history of US is fascinating and its journey into urological diagnosis and applications is even more exciting.

### U34

**From TB to bladder cancer: The BCG story**  
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In 1881, William Coley proposed the 'radical' notion of treating cancer with a vaccine. By 1921 Albert Calmette and Camille Guerin had developed a strain of attenuated *Mycobacterium bovis*, termed BCG. In 1935, Holmgren trialled BCG injections in 28, mainly gastric, cancer

patients. The American biostatistician, Raymond Pearl, reported an inverse relationship between tuberculosis and cancer in 816 autopsies conducted on patients with carcinomas and sarcomas. The BCG vaccine, however, received negative press in 1930 when 70 infants in Lubeck, Germany, died after routine inoculation. This was later found to be due to a contaminated batch of vaccines. Subsequently, there was a period of quiescence in BCG cancer research. In the 1950s, animal research into tumour immunity began to emerge. Coe and Fieldman (1966) described delayed hypersensitivity in guinea-pig bladders injected with BCG, demonstrating that the bladder was an immunocompetent organ. The first reported use of BCG in human cancer came from Georges Mathe (1969), a French oncologist, who used it to maintain remission in acute lymphoblastic patients. These observations paved the way for Alvaro Morales, who in 1976 conducted pioneering landmark work on intravesical BCG in recurrent superficial bladder cancer patients. This small but groundbreaking study comprised of 9 patients who had intravesical BCG via a urethral catheter at weekly intervals for 6 weeks. Check cystoscopies and biopsies confirmed a significant favourable outcome in the pattern of recurrence. Morales' ingenuity opened the field of research into intravesical BCG treatment, which now plays a fundamental role in bladder cancer management.

### U35

#### William Cheselden: the greatest lithotomist

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**Introduction:** William Cheselden was one of the leading English surgeons of the 18th century. He studied anatomy in London under William Cowper and began lecturing anatomy in 1710. That same year, he was admitted to the London Company of Barber-Surgeons and subsequently played a significant role in the formation of the Royal College of Surgeons of England. We review the working life of Cheselden and his achievements in the field of urology.

**Materials and Methods:** We have studied the life of Cheselden from his birth in Leicestershire to his medical education at St Thomas' Hospital through his development with John Douglas of the high operation to remove stones, to his experience with the lateral technique. **Result:** Cheselden's experience with the high operation for the stone, which used a suprapubic incision, was one of the first recorded operative series. It was published by him in 'A Treatise on the High Operation for the Stone (1723)' and reports nine cases performed in 1722, with one complication, that of a 'fatal pyonephrosis'. Prior to this the best Parisian series by Frère Jacques had a 40% mortality rate using a midline perineal approach. Cheselden modified and improved the lateral perineal approach. By 1728 he had performed 213 lateral lithotomy cases at St Thomas' Hospital with a mortality of only 9.4% (20 deaths). These results, at a time when operations were performed without antiseptic or anaesthetic must be viewed as remarkable. **Conclusion:** Cheselden is an important historical figure in surgical innovation with pioneering urological techniques.

U36

#### Obstruction or not? The history of the Whitaker test

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**Introduction:** The Whitaker test is a urodynamic study that will differentiate patients with residual or recurrent obstruction from those with dilatation secondary to permanent changes in the musculature. It is performed by percutaneous puncture of the renal pelvis with a nephrostomy. The upper urinary tract is perfused at a constant with saline with serial pressure recording in the renal pelvis and bladder. The purpose of this abstract is to review the working life of its inventor Robert Whitaker and historical development of his test.

**Materials and Methods:** We have studied the working life of Whitaker and inception of his test.

**Result:** Whitaker graduated with a BA degree in medical science from the University of Cambridge and continued his medical training at University College

Hospital, London. He was a Senior Lecturer in Urology at the London Hospital Medical School before starting work as a Consultant Paediatric Urology surgeon at Addenbrooke's Hospital, Cambridge in 1973 where the Whitaker test was developed. Whitaker had trained under John Blandy, one of the founding fathers of British urology, at the London Hospital. In 1994 Robert Whitaker was awarded the British Association of Urological Surgeons St Peter's Medal for notable contribution to the advancement of Urology. He retired due to ill-health in 1989. He is still a successful book author, lecturer and dissection demonstrator at the University of Cambridge.

**Conclusion:** Robert Whitaker and his test has its place in the history of innovative British urology and its worldwide impact during its time.

U37

**Donald Gleason – what a score: the history of the gold standard of histological grading for prostate cancer**  
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*Oxford University Hospitals, United Kingdom*

**Introduction:** Most well-informed patients with prostate cancer know their Gleason score. Uro-oncologists use this to make vital treatment decisions on a daily basis. We look at the history of the man who developed this score.

**Methods:** Pubmed/Google search on Gleason.

**Results:** Donald Gleason was born in Iowa in November 1920. Donald grew up in Minnesota. He trained in pathology at the Veterans-Administration (VA) Hospital in Minneapolis, where he remained after World War II. In 1962, he was approached by George Mellinger to develop a standardised pathological prognosticating system for prostate cancer. Mellinger was heading a multi-hospital Veterans-Administration Cooperative Urologic Research Group (VACURG). At the time, no single system existed leading to lack of standardised treatment.

Gleason was aware prostate cancer presented remarkably variable clinical courses and histological appearances. His original work on histopathology of 280 patients described nine different pictures. He found that in many cases there was more than one picture. He identified the

two most predominant pictures in each case. He found strong correlations between the new scores and overall as well as cancer-specific mortality rates. Gleason modified the nine pictures into five patterns, combining two patterns into one histological score. This was extended to 4000 patients with similar outcomes. Gleason published his system in *Cancer Chemotherapy Reports* journal in 1966. It wasn't until 1987 that it was recommended to be applied uniformly in all prostate cancer publications.

**Conclusion:** Donald Gleason changed prostate cancer management with his comprehensive yet simple scoring system, which has been adopted universally. He died of heart failure in December 2008.

U38

#### How bladder stones helped protect Britain from an 'Integrated' Europe 200 years ago

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**Introduction:** Many significant figures in European history have suffered with bladder stones. This chronic condition has shaped the Modern Europe and British political landscape.

**Methods:** With the current issues in Europe, a search of historical and medical literature was performed to see how urological disease may have influenced past European political frameworks.

**Results:** The most significant sufferer was Napoleon, Emperor of France (1804–1815). During his reign, France became the dominant European power. Dr Antommarchi performing his post mortem (1821) reported 'the bladder contained a certain quantity of gravel, mixed with some small calculi'. During the Battle of Bordino (1812), invading Russia, his valet reported that he dismounted his horse frequently and had difficulty micturating. Napoleon uncharacteristically kept his army on the battlefield instead of pursuing and vanquishing the retreating Russians. This decision proved pivotal, allowing the Russians to preserve combat strength and eventually force Napoleon from Russia. Napoleon's erratic decisions during the Battle of Waterloo (1815) led to defeat. He delayed his decisions and his attack allowing the Prussians time to advance,

divided his army and relied too heavily on inadequate Generals. He was thought to have a UTI at the time.

**Conclusion:** Napoleon's uncharacteristic decisions at the Battles of Waterloo and Bordinno may have been caused by sleep deprivation, pain and sepsis from his stones. He said of his urinary symptoms, 'This is my weak spot, it is by this that I will die.' They also caused the death of European unification and helped to protect British Sovereignty.

U39

#### Intravesical therapy for painful bladder syndrome

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Despite Parish first describing Painful Bladder Syndrome (PBS) in 1836, it was not until 1855 that the first intravesical treatment for the condition was administered. Mercier used silver nitrate preparations, that Dodson (1926) and then Poole and Rives (1944) advocated using in increasing concentrations. With efficacy lacking, vesical irrigations of Clorpactin WCS-90 were used with response rates between 60% (O'Connor, 1955) to 72% (Messing and Stamey, 1978). Unfortunately, treatment required anaesthesia and due to potential ureteric fibrosis, patients with reflux had to be excluded.

In 1968, Stewart et al. popularized intravesical dimethyl sulfoxide (DMSO) for PBS. Other than garlic mouth odour, side-effects were lacking and treatment could be administered as an outpatient. Symptomatic relief was reported by Ek and colleagues (1978) in 70% and by Fowler (1981) and Barker et al. (1987) in >80%. Hence, DMSO became the primary intravesical treatment for PBS. However, as relapse was common, continued treatment was necessary.

Weaver et al. (1963) reported the intravesical use of heparin. Although response rates were reasonable (60%), increased efficacy was obtained by combining it with DMSO (Perez-Marrero et al., 1993).

Other intravesical treatments that have demonstrated success include lidocaine (65%; Henry et al., 2001), pentosan polysulfate (40%; Bade et al., 1997),

chondroitin sulfate (33%; Hurst, 2003), doxorubicin (anecdotal; Khanna & Loose, 1990) and BCG (conflicting; Zeidman et al., 2004). With the ideal agent yet to be reported, it is therefore not surprising that 'cocktails' of the described drugs have also been investigated.

U40

#### The battle for TURP in UK!

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**Introduction:** Transurethral resection of prostate (TURP) is the gold standard for management of benign prostatic hyperplasia. However its introduction to UK was met with scepticism. We look at various stages in evolution of TURP in UK. **Materials and Methods:** PUBMED search of 'history of TURP', 'prostate surgery', 'surgery for benign prostatic hyperplasia', 'laser TURP' and 'minimally invasive treatment of prostate' as key words. All relevant articles and appropriate references were reviewed.

**Results:** Between the two world wars TURP using cold punch was taken up by Wardill in Newcastle and Lane in Dublin. Millin started performing TURP surgery in 1930. But with introduction of safer open prostatectomy techniques he all but gave up TURP in favour of open operation. Even in 1960 a surgeon has to travel to USA to learn TURP! The introduction of the rod lens telescope changed transurethral surgery completely.

TURP in UK was pioneered by John Blandy who produced a book on the subject which is famous for his legendary illustrations. Blandy had faced a lot of resistance to TURP and was in fact asked to give up the procedure to avoid bringing his institute into disrepute! Fortunately he persisted.

Over the past decade, Prostate surgery has moved further by introduction of LASER and other minimally invasive techniques.

**Conclusions:** TURP is still the gold standard. In the year of John Blandy's death it would be apt to revisit the history of surgery he untiringly pioneered in the UK.

U41

#### The history of the use of intravesical agents in superficial bladder cancer

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**Introduction:** In this study we review the history of the use of intravesical agents for the treatment of superficial bladder cancer.

**Materials and Methods:** We searched the literature on the use of BCG and chemo therapeutic treatments, tracing the story of these from first consideration to the regimes in use today.

**Results:** Immunotherapy developed as a result of observation in the 19th century that patients suffering with tuberculosis were less likely to develop cancers. Despite many false dawns in the 1970s the clinical effectiveness of intravesical BCG was demonstrated. The advantages of the intravesical approach as a way to deliver targeted, high dose chemotherapy with minimal systemic side effects were recognised from the early days of chemotherapy. Several cytotoxic agents were assessed in animal models and trials with the most prominent being Thio-TEPA, mitomycin C, Epodyl and Andriamycin. Despite promising results in terms of reducing recurrences the effectiveness of intravesical chemotherapy agents in improving long term prognosis has yet to be demonstrated especially when compared to intravesical BCG immunotherapy. However, researchers using techniques such as heating or application of electromagnetic currents hope that this can be achieved.

**Conclusion:** The bladder is especially suited for direct anti-cancer therapies. These form an essential part of contemporary cancer management. Their success over the last four decades is driving further innovation in this area.

U42

#### History of natural remedies for prostate disorders

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**Introduction:** Many men afflicted by prostatic disorders such as hyperplasia, inflammation and cancer often use some

form of complementary natural remedy to treat their condition.

**Methods:** A comprehensive literature search and historical review was undertaken of the wide array of foods, herbs and naturally derived compounds that have been used and promoted in the management of prostatic disorders globally since the very first recognition of these disease entities.

**Results:** Several of the foods implicated are indigenous to non-western civilisations. Tomatoes were introduced into Europe by the 16th Century South America Spanish colonialists. Their health benefits were

attributed to their lycopene rich anti-oxidant content. Several studies between 1940s and 1990s showed an inverse relationship between prostate cancer risk reduction with increased tomato consumption.

Pomegranate native to Persia was domesticated in 4000 BC. Its medicinal benefits are described in one of the oldest medical texts, Ebers Papyrus from ancient Egypt (1500BC). It confers chemoprotection against prostatic disorders, due to its potent anti-oxidant, anti-microbial and anti-inflammatory properties.

Soy and Green Tea have Chinese origins dating back 4000 years and also show health benefits in prostatic disorders. Since the 1990s several naturally derived agents have been purified and sold as fortified dietary supplements to boost prostatic health, including Vitamins D and E, selenium, zinc, and the plant extract saw palmetto.

**Conclusions:** Naturally derived remedies for the management of prostatic disorders have existed from historical times and will continue to play a key role as our working knowledge of their mechanisms of action expands with time.