BAUS Section of Endourology

BAUS Endourology
Residential Operating Course 2024 Report

St George's Hospital, Tooting, London

Course Convenor: Miss Rashmi Singh

Co-organiser: Mr Marco Bolgeri

Boston Scientific

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Background

The BAUS Endourology Residential Operative course offers a unique opportunity for trainees to develop technical operating skills under the supervision of an expert faculty. The course focuses on the operative management of upper urinary tract calculi +/- benign prostatic hyperplasia depending on trainee preferences. Applications for the course are competitive and are aimed at trainees who are BAUS members and in their final training year.

The 2024 course was held at St George's hospital on 23-24 September and convened by Miss Rashmi Singh. Six high calibre candidates submitted an application and 4 were selected. Prior to the course, conversations took place with all the candidates to determine their interests and preferences. All were keen to get maximal exposure to PCNL -standard and mini and flexible ureterorenoscopy with new suction-assisted techniques.

The delegates arrived on 22nd September and checked into the on-site Pelican Hotel. That evening the delegates and some of the faculty went out for dinner. This was an opportunity to meet each other and to discuss the timetable for the course itself. We discussed practical considerations and the challenges of operating in an unfamiliar environment with different equipment and theatre staff. It was explained that for the duration of the course a member of faculty will be scrubbed with the trainee for each case to ensure patient safety.

Day One 23rd September 2024

The trainees and faculty met for breakfast at 0730. The timetable for the day was finalised and the trainees were split into pairs. One pair were allocated to DSU for the day (ureteroscopies) whilst the other pair were allocated to main theatre (PCNLs). A faculty member was designated to each case

All cases were presented by the in-house registrar and imaging reviewed. Approaches to each case were discussed. At the end of the debrief the delegates and faculty members left to see the patients, to introduce themselves and complete the consent process. The teams then went to their relevant theatres to meet the Anaesthetic and scrub teams and to perform team brief.

In addition to the assigned faculty for each case there were additional faculty members and a patient safety advocate who moved between theatres providing supervision and guidance. At the start of each case faculty and trainees completed the WHO checklist. There were two percutaneous nephrolithotomy (PCNL) cases each day in main theatre, one super-mini PCNL in the morning and one standard PCNL in the afternoon whilst in parallel in day surgery there were four ureteroscopies, two in the morning and two in the afternoon- some using suction access sheaths/single use suction ureteroscopes. Moses high power Laser was available in both theatres. Percutaneous access was led by our Interventional Radiology colleagues which is standard practice at St George's.
At the end of each case the operation notes were completed by faculty and trainees with feedback provided on an individual basis.

During the lunch break and at the end of the day, the team fed back on the cases. We discussed what went well, challenges experienced and what could have been done differently. At the end of the day all patients were reviewed by one of the team.

The faculty dinner was in a curry house which Tooting is renowned for! We were joined by several members of the theatre team, anaesthetists and industry sponsors. An enjoyable evening was had by all






Day Two 24th September 2024

On the second day the faculty and trainees met for breakfast at 0730 again to review the cases for the day. The trainee pairs were switched from main theatre to DSU. There were four ureteroscopies in DSU and 2 PCNLS in main theatre with similar mix and complexity to day 1. Once PCNL case cancelled at short notice, but we were able to bring in a replacement case on standby. Similarly, a cancelled ureteroscopy case was replaced by an emergency case. This minimised disruption and ensured all trainees had cases. Once again, a debrief and feedback session was done over lunch and at the end of the day.

All patients made a good recovery from their procedures and were safely discharged with no significant adverse event.






Summary

This course was an excellent opportunity for trainees with a SIM in endourology to further enhance their technical skills with input and guidance from an expert faculty.
They also had the opportunity to practice techniques such as super mini PCNL and suction assisted ureteroscopy. They were also able to get pearls of wisdom from our skilful and experienced anaesthetic and interventional radiology colleagues.

Operating in a new environment with an unfamiliar team was good experience for them. The faculty and theatre team were welcoming and supportive throughout. The day-to-day challenges within the NHS of bed availability and case cancellations and how to manage this added to the non-technical element of the course.

Trainee Feedback

Eric Edison

The BAUS Endourology residential course was a unique opportunity to refine and develop surgical skills and decision making. We were split into two pairs of delegates, and alternated days of PCNL and ureteroscopy. There was a brief at the start of the day and a debrief at the end. These were fantastic opportunities to discuss with a room of experts the nuances of strategy for each case.

My first day was in main theatres for PCNL. My delegate partner Mahmoud performed the PCNL in the morning. Before the case we discussed in detail the planning for the puncture. This included discussion about different techniques including skin marking, bullseye, and ultrasound guidance. In the afternoon I performed a miniPCNL. This was a valuable opportunity to handle the miniPCNL equipment, with expert oversight from multiple consultants. For both cases the interventional radiology team were very accommodating and willing to teach.

The second day involved ureteroscopies. This involved the opportunity to learn how to use a flexible and navigable sheath (FANS). My first case involved a stone in a fibrosed calyx with a very tight infundibulum. This was a fantastic opportunity to hone fine operative skills and ergonomics, as well as decision-making.

The dinners were the icing on the cake, as these provided a great opportunity to talk and network with each other.

Zoe Panayi

The endourology residential began with a welcome meal the evening before the course. This was great way to get to know the other delegates plus the internal and external course faculty. The course itself consisted of a mixture of ureteroscopy and PCNL cases (both standard and mini-PCNL), which took place across two theatres. Day 1 started with a breakfast briefing to discuss all the theatre cases and to review relevant imaging. This was a very insightful discussion, debating the different surgical approaches and potential difficulties that may be encountered. We then split into the ureteroscopy or PCNL theatre lists and consented our relevant patients. Starting in daycase theatres, I performed a re-do flexible ureteroscopy for a collection of lower pole stones, which had persisted following partial treatment of a large PUJ stone. I was able to use the much-anticipated suction access sheath for this case, which I had not previously used. This enabled complete clearance of all remaining fragments. We performed several other challenging ureteroscopy cases this day, receiving invaluable feedback and mentoring during each procedure.

The second day I was involved in the standard and mini-PCNL cases. Again, this was an excellent opportunity to experience and learn about different surgical approaches, positioning and equipment used for PCNL access. Encountering an incidental small bladder tumour prior to one PCNL prompted an insightful multidisciplinary debate about how best to further proceed. For the mini-PCNL I was again able to trial use of a suction sheath and appreciate how this can augment stone clearance in a prone procedure. At the end of both days, we had a group debrief of all the cases, learning from everyone's theatre experiences.

Overall, I learnt a huge amount from this experience. Not only from the operating itself, but also through debating alternative surgical approaches and techniques, and appreciating differences

in equipment used in other units. I feel that having both internal and external faculty enriched the learning experience. Everyone on the course was approachable and enthusiastic, and clearly a lot of preparation had been put into the course to ensure it ran smoothly (even with standby patients available for unexpected theatre cancellations). Having just started as a new consultant, this course has equipped me with new skills, an appreciation of novel endourology equipment, and confidence that I will take forward into my future practice.

Jonathan Lee

Day one started with going through the PCNL and morning day surgery cases. We reviewed the case history, CT scans and x-rays involved. Trainees were split into groups of 2, and I was allocated to day surgery theatres for day one. We all then went to consent the patients and completed the team brief. My case was a patient with lower pole stone and a stone in a tight upper pole calyx. The side of the operation had a previous ureteric re-implantation. Prior to starting the procedure, I enjoyed the through discussion about the logistics of the case and potential challenges. Cystoscopy identified the re-implanted left ureter at the bladder dome and sensor wire easily gained access to the collecting system. PUSEN 7.5Fr disposable Flexible Ureteroscope was used free hand to gain access and inspect the ureter up to the renal pelvis. 10/12Fr Clearpetra FANS was then placed. It was a good experience to learn performing diagnostic FURS with active suction on as the view is different with a partially collapsed collecting system. Once the stones were identified, Lumenis Pulse 120-watt holmium laser was used to dust and subsequent fragment the stones into tiny fragments. I then had the opportunity to practice the technique of vortexing the fragments with the FANS. The scrubbed consultant pointed up some really valuable tips (I.e. strapping the collecting jar for FANS securely to prevent it pulling the access sheath, placing the tip of the scope just slightly distal to the FANS and only advancing the FANS once you can visualize the fragments, remembering to cover the vacuum port to get a better suction during vortex, being cautious when accessing tight infundibulum as it can cause trauma and bleeding); all really valuable tips that helped the procedure proceed at a more efficient pace.

After lunch, we debriefed about the morning cases and went through the day surgery cases for the afternoon. My allocated case was a patient with a right 8mm PUJ Stone. 6Fr Semi-rigid URS identified a tight distal ureter which would not accommodate the 6Fr tip even with a second wire. We discussed potential management options, and we then switched to a 4.5Fr Semi-rigid ureteroscope which navigated quite easily past the tight distal segment. I was able to gain access to the proximal ureter and was able to see the 8mm stone impacted at the PUJ. I had to exchange to a flexible URS as the semi-rigid URS would not get close enough to safely laser the stone. Holmium laser was used to dust the stone and a smaller fragment retropulsed into the kidney and was removed with a Dakota basket. Both patients were stone free at the end of the procedure.

On day two, I was allocated to main theatres for the day. We met up at 0730 to review the cases for the day and discussed any early feedback from the day before, including a complication (post-op haematoma) faced by one of the PCNL patient from day one. This provided a realistic experience on life as a consultant and provided valuable case reflection. My allocated prone PCNL case for the day was a 2cm renal pelvic stone. We aimed to perform the case as a standard PCNL, reviewed relevant clinical history, CT scan and consented the patient as a team. After the theatre brief, as a team with IR, we discussed about access location, size and potential difficulties for the case. I enjoy learning how different departments perform the procedures as

there is always something to take home about. We started out with a flexible cystoscopy and noted a 1cm papillary lesion superior and lateral to the right UO. We discussed potential options, and it was an amazing learning point to see a MDT approach (involvement of uro-oncology team, other faculty members and patient advocate) to reach a consensus. We decided to perform a bladder biopsy and cystodiathermy and proceed on the PCNL.

It was really valuable to have IR input on how they gain access and tips on overcoming challenges. Once lower pole access was gained, direct visualization of the stone noted, and I had the opportunity to use the Swiss lithoClast Trilogy system. I was pleased to learn hands-on tips from the scrubbed consultant (I.e. rotating and utilizing the beveled edge of the Amplatz to help gain better view to treat the stone). I also learnt the importance of being clear with my instructions, how to better myself as a leader of the team and ensure clear communication with the team to ensure the case goes safely and efficiently despite being in an unfamiliar environment.

Throughout the course, I have been amazed at the level of organization, the capacity to deal with cancellations and challenges faced throughout the day. There was a high faculty to trainee ratio, appropriate case selection, invaluable opportunity to connect with experienced colleagues and other trainees and the team was very welcoming throughout. It has been a great pleasure to be a part of this course and would highly recommend to future trainees.

Mahmoud Abuelnaga

Right from the start, it was clear that the course was exceptionally well-organized, with a great deal of time and effort put into planning the two days.

The day began with a review of the scans alongside all the faculty members then we accompanied the responsible consultant to obtain patient consent.

My first case was a standard PCNL for a partial staghorn stone. The puncture was performed by an IR consultant, who guided me through each step of the bull's eye technique. I then dilated the tract and inserted a 30F sheath under fluoroscopic guidance. I used the EMS Trilogy to fragment and remove the stone. It was a challenging case, but with the support and techniques shared by the faculty, who were present and offering advice throughout the procedure, we successfully cleared the stones.

The second case, a mini PCNL, was performed by another candidate. It was my first experience with the SMP ClearPetra sheath, and the procedure went smoothly, with excellent visibility throughout. At the end of the day, we had a debriefing session with all the faculty members and candidates, where we reviewed the cases and discussed the key lessons learned.

On the second day, my first patient was initially scheduled for a flexible URS, but we discovered an incidental bladder tumor. As a result, I performed a TURBT, and we collectively decided not to proceed with the ureteroscopy. I gained valuable insights from that discussion, particularly on how to handle unexpected situations like this. My second case involved rigid ureteroscopy in a patient with an enlarged prostate, where we discussed various techniques that could be applied in such a scenario. The procedure went smoothly, and we concluded the day with a debriefing session, which was extremely beneficial.

This course was highly valuable, offering not only the chance to learn new surgical techniques and explore different equipment but also to connect with colleagues and exchange experiences. Over the two days, we had the unique opportunity to gather practical insights, identify commonalities in surgical approaches, and reinforce the importance of clear leadership and communication for safe operative management, even in unfamiliar environments. It was a pleasure to participate in this course, and I would enthusiastically recommend it to future trainees.

Acknowledgements

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Course Convenor: Rashmi Singh

Co-Organiser: Marco Bolgeri

Internal Faculty:

Mark Lynch- Urology
Raj Das- Radiology
Lakshmi Ratnam- Radiology
St George's urology resident doctors- Thomas, Hasan, Abdi, Amr and Katherine
Afraah Ansar- PPC
Cathryn Anstis- Urology service manager
All our Anaesthetic colleagues and theatre staff

External faculty:

Matt Bultitude- Guy's and St Thomas's
Stephen Gordon- Epsom and St Helier
Subu Subramonian- Queen Elizabeth, Birmingham
Hari Ratan- Nottingham University Hospital
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Industry Sponsors:

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BAUS section of Endourology, Beverly Tomkins and Patricia Hagan