Clinical and Research Elective, Paediatric Urology

The James Buchanan Brady Urological Institute

Johns Hopkins Hospital, Baltimore, USA

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Cameron E. Alexander, University of Aberdeen

cameron.alexander.09@aberdeen.ac.uk

The James Buchanan Brady Urological Institute, or simply "The Brady" to those that work there, has consistently ranked amongst the best urology departments within the USA, and is world-renowned for its contributions to clinical practice and research that have helped shape modern urological practice. It therefore represented an ideal location for a summer elective, and as someone who is curious about a career in urology I was excited by the prospect of six weeks at Johns Hopkins Hospital in Baltimore.

It's perhaps no secret that American surgeons work very hard: ward rounds started at around 6.30am and on several occasions, especially with complex, reconstructive cases, operating could continue until after midnight. This kind of working life did require time to adjust, but was certainly made easier by an intellectually stimulating environment and by the support and friendship of the paediatric urology team. Indeed, such working hours have clear benefits in terms of surgical exposure; during my time at Hopkins I was able to develop my surgical skills through assisting in over 60 paediatric cases which ranged from simple circumcision and orchiopexy, to hypospadias and epispadias repairs, ureteral implantation and complex reconstructive surgery for major birth defects including bladder and cloacal exstrophy. Indeed, there were several moments throughout my elective when I was acutely aware that I was witnessing the forefront of urological science: this included the construction of a

penis (phalloplasty) for patients with bladder exstrophy using a radial foreaem free flap, the creation of a continent urinary stoma in teenagers who had been incontinent and in nappies all their lives, the management of patients with disorders of sexual development, and the use of robots to cure patients of kidney, bladder and prostate cancer. The follow-up of such patients in outpatient clinics with the paediatric urology team made for an extremely satisfying experience; patients were extremely grateful for what, in many cases, proved to be a life-changing therapy for them, and I gained a strong appreciation for the importance of such tertiary care centres in the management of complex and rare disease.

Research and teaching are central to the Brady Urological Institute and this is most clear at the weekly grand rounds in which current urological practice is debated and research is presented, often by prestigious guest speakers. The residents in training are expected to know and understand, and to undertake themselves, the research that defines the specialty within which they work. Furthermore, this is universal and not applicable only to a small number of trainees who choose research as an additional component of their training, or just to climb the career ladder. Indeed, trainees are given core academic reading from the literature which they are required to present and be questioned on at grand rounds. Moreover, the short presentation which I delivered to the paediatric urology team on CHARGE syndrome was required to be grounded in the latest research literature.

Furthermore, the urology residents organise a weekly morning teaching schedule in which they take time to teach, and to test, one another on a key subject in urology. What's significant is that this isn't just simple slideshow that has been pulled together the night before: peer-assisted teaching is taken seriously and there is a strong consensus on the benefits of shared learning and collective involvement, and on the ability of residents to motivate and inspire one another. In the UK we endlessly discuss the limitations imposed by an under-funded and under-resourced NHS, and by time directives, but I expect there are lessons to be learnt on research and training from American residency programmes, like that at the Brady, which would not necessarily require expensive interventions.

I was also fortunate to be involved with ongoing clinical research projects examining sexual health outcomes in adults with bladder exstrophy, and surgical outcomes in exstrophy patients with pelvic organ prolapse. I helped to identify suitable patients for study inclusion, to develop study questionnaires and collect data through patient phone calls, and I have been able to maintain research involvement on returning to the UK.

It would not be fair to talk of my time at Hopkins without a description of the mentorship and kindness which I received from Professor John Gearhart, Director of Paediatric Urology. Having undertaken a Fellowship in Paediatric Urology under J. Herbert Johnson at Alder Hey Children's Hospital in the Liverpool in the '80s, as well as being an honorary Fellow of the Royal College of Surgeons of Edinburgh, he spoke fondly of his British connections. Indeed, he fostered a great belief in strong surgical mentorship and teaching: he went out of his way to ensure that I benefited from a full range of learning opportunities, was made to feel welcome by the wider surgical community at Hopkins and experienced the best of summer in Baltimore. Moreover, on my first weekend in the US he invited me round to his house to eat steak and swim in his pool and to meet his family and neighbours. Such social interaction between faculty and trainees was occurred regularly at the Brady: it encouraged an environment of mutual respect, community and removed unhelpful hierarchical structures in which faculty were to be feared and difficult to approach.

There was perhaps nothing more inspiring, however, than witnessing the standard of care and strong relationships which Professor Gearhart developed with his patients and their families. Bladder and cloacal exstrophy are major birth defects requiring complex reconstructive surgery, and as such cause major distress for families. Professor Gearhart's contribution to the successful management of these patients from birth into their adult life has benefited families worldwide.

I am sure that my summer at Johns Hopkins will stand out as an unforgettable experience in my medical school career, not just because I was in the privileged position of witnessing the life changing work that Professor Gearhart performs on children, but because I received such a warm and sincere welcome from a great surgeon, and from so many of his colleagues. It is my hope that I will have the

opportunity to return to the US to undertake a period of surgical training or research in the future. I am extremely grateful to the Royal College of Physicians and Surgeons of Glasgow for their financial support.