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CUA-EAU exchange program

INTRODUCTION

From March 1–13, 2023, three early-career Canadian urologists participated in an educational exchange with the European Association of Urology (EAU). The three individuals selected for the exchange — Dr. Phil Bach, Dr. Michael Chua, and Dr. Katherine Moore — along with their senior mentor, Dr. Laurence Klotz, were received by three European institutions, with their experience culminating at the 2023 EAU annual meeting in Milan, Italy.

FIRST STOP: SHEFFIELD, U.K.

The group was warmly welcomed to the U.K. by Dr. Chris Chapple, Dr. Jim Catto, and Dr. Nadir Osman. The first academic session included the following talks:

1. Dr. Laurence Klotz: Novel tools in the active surveillance pathway
2. Dr. Marcus Cumberbatch: Active surveillance and finasteride
3. Dr. Ibrahim Jubber: The urinary tract in the zebrafish
4. Dr. Phil Bach: Management of non-obstructive azoospermia
5. Dr. Nadir Osman: Novel treatment approaches for urethral stricture
6. Dr. Chris Chapple: Tissue engineering — the Sheffield experience
7. Dr. Katherine Mooore: Anticholinergic use in children
8. Dr. Michael Chua: Mitrofanoff creation and different approaches

The talk on the zebrafish model was truly outstanding. Using a luciferase reporter gene linked to a gene for urothelial differentiation, the group has defined the anatomy of the zebrafish bladder, which was not previously established. This technology could be readily applied to other species.

On day 2, participants visited the extraordinary Advanced Manufacturing Research Centre (AMRC) of the University of Sheffield. This massive facility was established to take research ideas from pilot phase to commercialization in a wide range of areas, with a particular focus on healthcare. The centre

has had many successes and the visit was deeply inspiring.

While in the U.K, the group was treated to a tour of the historic Sheffield steel works and museum, as well as the beautiful Sheffield countryside, including a visit to Wickham Castle, an Elizabethan estate that has remained essentially unchanged since the 17th century.

SECOND STOP: PARIS, FRANCE

At the University Hospital La Pitié Salpêtrière in Paris, the Canadian contingent observed a robotic prostatectomy with Dr. Morgan Roupret (for a patient with International Society of Urological Pathology grade group 1). The main learning point — the Paris group routinely sends patient for preoperative training in pelvic floor rehab, as they believe this significantly improves outcome.

Dr. Pierre Mozer, computer science expert, presented a digitally activated artificial urinary sphincter (AUS) he developed with implanted reservoir/pump/pressure monitor that has a battery life of 7–8 years. The AUS is implanted subcutaneously, with the cuff opened by tapping skin over the device or by a separate digital switch. The device also opens automatically if the cuff senses an increase in pressure (i.e., from a catheter) or if there is no voiding for 12 hours.

The group further observed some transrectal prostate biopsies using the Koelis fusion system. Koelis is image-based, so patient movement after co-registration is not an issue.

The Canadian presentations were focused on non-obstructive azoospermia (Dr. Phil Bach), use of anticholinergics in children (Dr. Katherine Moore), and transitional care (Dr. Michael Chua). The latter talk elicited great interest, as the Parisian pediatric urologists have the same difficulties as their Canadian counterparts transitioning complex patients. In France, the path to pediatric urology is through pediatric surgery residency, not urology; thus, there is typically poor collaboration with adult urology. Interestingly, the more focused a hospital is on pediatrics, the worse the transition to adult care.

Dr. Klotz rounded out the Canadian presentations with a talk on developments in imaging and biomarkers in active surveillance.

French healthcare — like that in many countries, is struggling. There are two types of public hospitals: academic and community. Doctors in private hospitals earn 4–5 times the income of those in public hospitals; thus, the doctors who stay in the public system are only those who are either very research-oriented or able to have a mixed practice. Up to 80% of the doctors in the public, non-academic hospitals are foreign-born and trained, and have no choice. Furthermore, there is a constant hemorrhage of physicians and nurses to less expensive cities than Paris.

FINAL STOP: MILAN, ITALY

In Milan, the group met Dr. Francesco Montorsi and Dr. Alberto Briganti at San Raffaele Hospital. They watched a robotic radical prostatectomy on a man with grade group 2 and a HRR mutation. In another room, they witnessed a Mitrofanoff reimplant augmentation cystoplasty in a 17-year-old patient. Both these operations were done entirely by the consultant staff; the residents watched on a screen, but did not scrub in.

In the afternoon, participants attended a seminar. Dr. Klotz discussed active surveillance and Tulsa; Dr. Bach spoke about survivorship management in prostate cancer in Edmonton coming from a vast referral area.

As a system-based observation, San Raffaele is a hybrid public and private hospital. For private patients, surgery is all done by consultants. They acknowledge that this creates challenges in providing sufficient resident surgical experience and, therefore, send their residents to other countries to augment their surgical training. The focus of resident training at their center is research and non-operative urology. One of the Italian residents presented a summary of the group's prostate cancer research projects, which were very impressive (at least 15 distinct projects, each of which was substantial).

On the last day of the tour, the group watched two separate cases unfold: a robotic prostatectomy and a clitoral reduction in an 18-month-old girl with congenital adrenal hyperplasia. Final presentations focused on



A guided tour of the innovative Advanced Manufacturing Research Centre of the University of Sheffield with Dr. Chapple was a tour highlight.



The Canadian exchange group was welcomed warmly at the University Hospital La Pitié Salpêtrière in Paris.

infertility, as well as a summary of the many extensive research program from San Raffaele.

On the last evening of the tour, the traditional “Friendship” dinner took place to formally celebrate and commemorating the exchange — two weeks of sharing ideas, watching outstanding surgeries, and establishing relationships.