

## Renal Association Elective Bursary Essay – Lesley Arends

My elective took place in Auckland City Hospital (ACH), where I spent six weeks with the Renal Department. The renal ward is divided into two teams: medical and transplant. I attended the renal medical team's ward round each morning where I was made part of the team. In New Zealand, final year medical students are called Trainee Interns (TIs), and are encouraged to do the same job as a House Officer. As a final year medical student, I took on this role, which was a fantastic learning experience. The renal House Officers taught me the about the various aspects of their job, and I gained a good understanding of the health care system in New Zealand. Most notably, I learnt many transferrable skills to the job of a Foundation Doctor in the UK such as: writing in patient notes, referring patients over the phone to other departments and looking after sick patients on the ward.

I learnt how important a thorough fluid status examination is in renal patients. In particular measuring the JVP, pedal oedema, mucus membranes, listening to the chest for signs of pulmonary oedema, heart murmurs as well as any other signs of fluid overload or dryness. It surprised me how many inpatients were end-stage renal failure patients on dialysis, and the number of re-admissions with recurrent line issues and infections. I also experienced a number of patients on the ward undergoing end of life care. I was overwhelmed how kind and compassionate the team was, and their ability to make patients and their families as comfortable as possible.

The ACH Renal Department is one of the major centres for Kidney transplant in New Zealand; carrying out over 120 renal transplants in 2017, with both deceased and live donors. I attended transplant clinic for patients who were undergoing long term follow up post-renal transplant. This was a great experience to see how well patients looked post-transplant, in comparison to some of the more sick patients with ESRF on the ward. I also learnt about the importance of good blood pressure control, the increased incidence of new onset diabetes after transplant and the need to closely monitor blood sugars. Many patients who had received live donations attended with their kidney donor. I gained insight into the motivation of patients to be as healthy as possible and maintain good control of their graft function when it was donated by a friend or relative. I noticed that many patients had developed skin cancers since starting on their immunosuppressive medication post-transplant. After carrying out a literature search I found an increased incidence of malignancy, especially non-melanoma skin cancers in renal transplant patients, and therefore the need to examine the skin and be vigilant for all cancers.

Each week I attended House officer teaching for all first year HOs. Topics included: DVT – diagnosis, management and anticoagulation; ENT emergencies for House Officers – particularly post-parathyroidectomy bleeding and epistaxis; the family meeting – good communication and discussion of care; and trauma and pre-hospital care. These were really valuable sessions, particularly as they were aimed at what a HO is expected to do in these situations.

The Renal Department also had its own House Officer teaching each week given by a number of different people in the renal team. These sessions covered: renal pharmacy –

renal dosing and the differences in pharmacodynamics and pharmacokinetics in renal patients; dietician input for renal patients; acute kidney injury; peritoneal dialysis – physiology as well as the different regimes available and who they would be suitable for; the effects of renal disease on the heart – particularly cardio-renal syndrome in haemodialysis.

I also had the opportunity to watch procedures: I accompanied one of our patients to interventional radiology, where they had a Tenckhoff catheter inserted to enable them to start peritoneal dialysis, and another patient having a tunnelled line inserted for haemodialysis. I also spend a day in theatre to see a live donor renal transplant from a father to his son. This was an incredible experience; I observed the laparoscopic nephrectomy in the morning by the urologists and was able to scrub in and assist the transplant surgeons in the afternoon as they implanted the kidney into the child. As the kidney to be transplant was so large compared to the two-year-old child, it was inserted intra-peritoneal, and the renal artery and vein were sutured onto the aorta and IVC respectively. It was fantastic to be able to experience a renal transplant as it was the topic of my elective project, and as they are not performed in the hospital that I train in as a medical student in the UK.

During my attachment I carried out a project, this was an audit: The efficacy and toxicity of the re-introduction of co-trimoxazole as prophylaxis for pneumocystis jiroveci pneumonia (PCP) in renal transplant patients. As there has been an increase in outbreaks of PCP in renal transplant units worldwide and two cases of PCP were diagnosed in ACH in October 2017, the renal department decided to re-introduce cotrimoxazole prophylaxis in all renal transplant patients. Not all patients could be recommenced on co-trimoxazole and many stopped the medication before they had completed the full course of prophylaxis. The aim of my project was to investigate the efficacy, toxicity and reasons why some patients did not take the full course of co-trimoxazole prophylaxis. I collected data on the development of PCP, co-trimoxazole prophylaxis and changes in serum creatinine levels before and after commencing therapy by reviewing the hospital electronic records. I presented my findings as an oral presentation to the ACH Renal Department and have written up the project as a report. This research taught me about the difficulties of implementing a prophylaxis scheme, the importance of good documentation in clinical notes and the complications of renal transplants.

I have had a fantastic time in the ACH Renal Department and would highly recommend an elective in renal medicine. Through my project, teaching sessions and spending time on the ward I have greatly improved my renal and general medical knowledge. Auckland has been a great place to live for 6 weeks and I'm grateful for the opportunity to travel to New Zealand for my elective.

Lesley Arends  
Final year medical student, University of Aberdeen