

Renal Association Elective Report

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I spent 4 weeks of my elective on a renal placement at Princess Alexandra Hospital (PAH), Queensland, Australia. I chose to explore my interest in nephrology at PAH further because it is a highly specialised nephrology and transplant centre. I hoped to observe procedures, learn from patient cases and gain better understanding on transplants. I organised a project to carry out prior to my placement which was an observational cohort study and thus developed new skills such as gaining ethics approval and interpreting statistical data.

End Stage Kidney Disease (ESKD) is increasing in prevalence in Australia and globally¹. A kidney transplant is the ideal choice in treating ESKD offering a survival and quality of life advantage, but due to organ shortages, many patients who would benefit from a transplant are not able to receive one². The elderly population with co-morbidities are a particular group who could greatly benefit from a shorter waiting time to transplant^{3,4}. The Queensland Renal Transplant Service has utilised kidneys in which small renal tumours have been resected as a source of organs for transplant since May 1998. These kidneys are offered to more marginal recipients with appropriate informed consent and with commitment to lifelong monitoring of the graft. The transplantation of kidneys following removal of tumour kidneys (TK) is a novel way of increasing the donor pool. The aim of the study was to describe survival for patients who received a kidney transplant following the removal of a small renal tumour as compared to those patients who either remained on the transplant waiting list or received a standard deceased donor transplant. Furthermore, in order to assess the safety issue regarding the novel source of transplantation, I investigated the early complications that occurred and the rate of tumour recurrence in TK recipients.

This study involved a rather steep learning curve to understand transplantation and complications that may arise. It also involved gaining access to different databases to collect and collate the data efficiently. Support from the team was amazing, as I had never experienced such enthusiasm before as a team of consultants, registrars and a statistician were all involved in this project. Although I was not able to actively carry out the analysis, I now have a better understanding on how the application of different statistical tools can extrapolate various information from results. I feel more confident now when critiquing results of clinical papers in terms of biases and important factors that should be included. I presented my findings to the department and am now currently working on writing up this study.

In addition to this project, I was also able to experience the clinical side of transplantations by attending ward rounds which included pre-op and post-op patients and those with late complications. Transplant clinics gave me an insight into a transplant patient's journey from

discussion of activation to the follow up of their transplant. This informed me of important factors to include in the study when comparing deceased donor recipients to tumour kidney recipients such as blood group due to a major difference of waiting time. I attended transplant meetings where the allocation of priority of patients on the transplant list for the state of Queensland and witnessed the decision making process between transplant surgeons mainly urologists, nephrologists, transplant nurses and registrars. During my placement, I also observed a transplant surgery which was I found to be truly informative as it gave me a perspective on intra-operative complications that could occur and have a better appreciation for the anatomy of the renal system.

Overall in comparison to the UK health care system, it is rather similar even in terms of challenges faced by clinicians such as the increase in obesity and diabetes, thus affecting their eligibility to be placed on the live donor list. However, the impact of certain diseases common among the Aboriginals and their limited access to healthcare due to logistical issues is unique. This transplant and specialist centre covers such a vast area which requires tremendous travel from patients to attend clinics and dialysis centres are available but scarce and thus a challenging issue clinicians must consider when making decision particularly when deciding between peritoneal and haemodialysis. Another major problem faced in Australia is the significantly high risk of skin cancer in transplant recipient, poses a challenge to clinicians as the risks and benefits must be carefully weighed and discussed with patients.

This placement has proved to be tremendously encouraging and stimulating, and has thus helped me develop both my clinical and research skills. I hope to find further project opportunities in the future and would like to take the opportunity to thank the Renal Association for their support.

1. Lozano R, Naghavi M, Foreman K, et al. Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. *The Lancet*. 2013;380(9859): 2095-2128.
2. Ojo AO, Hanson JA, Meier-Kriesche H-U, et al. Survival in recipients of marginal cadaveric donor kidneys compared with other recipients and wait-listed transplant candidates. *Journal of the American Society of Nephrology*. 2001;12(3): 589-597.
3. Tonelli M, Wiebe N, Knoll G, et al. Systematic Review: Kidney Transplantation Compared With Dialysis in Clinically Relevant Outcomes. *American Journal of Transplantation*. 2011;11(10): 2093-2109.
4. Wolfe RA, Ashby VB, Milford EL, et al. Comparison of mortality in all patients on dialysis, patients on dialysis awaiting transplantation, and recipients of a first cadaveric transplant. *New England Journal of Medicine*. 1999;341(23): 1725-1730.