

## **My Elective Experience Report**

This report aims to summarise my elective experience, which took place in the National Hospital of Sri Lanka (NHSL) in Colombo, Sri Lanka. During my 6 week placement under Professor Saroj Jayasinghe and his team, I was able to:

- Observe the presentations of patients suffering from chronic kidney disease (CKD) in Sri Lanka, and subsequently observe the various methods of renal replacement used to manage them.
- Observe the presentations and management of patients suffering from acute kidney injury (AKI).
- Perform a literature review to identify biomarkers that may be used to recognise AKI secondary to snakebite early.
- Develop a website, designed for the purpose of medical education.

The Sri Lankan health system is similar to that of the UK, with Government funded hospitals being free at the point of access. However in comparison to the UK, which spends approximately \$3500USD per person on health care, Sri Lanka only spends about \$70USD (WHO. 2013). Given this statistic, I was keen to see how the country's healthcare system deals with its patient loads, especially in the field of renal medicine.

My elective was based on a nephrology ward, giving me the opportunity to interact with many patients suffering from established CKD. Complementing literature published by the department (Gooneratne et al. 2008), majority of the patients had kidney disease secondary to diabetes and hypertension, with a smaller number of patients developing CKD due to Systemic Lupus Erythematosus or due to unknown origins.

The burden of CKD in Sri Lanka is a growing problem, and this reflected in the number of patients that were admitted into the wards. The in-patients with established CKD were mainly admitted due to acute-on-chronic episodes, which were managed in a manner similar to that in the UK. It was inspiring to see that despite the limited resources faced by the department, medical treatment was delivered at a high standard, with investigations being used intelligently to cut the costs of unnecessary tests. Instead of compromising the quality of healthcare delivered, the consequences of a limited budget manifested in the overcrowding of wards, with some in-patients having to share beds, sleep on benches or on mats.

I was also fortunate to interact with patients suffering from Chronic Kidney Disease of Unknown Aetiology (Senevirathna L. et al. 2012), which is a renal condition of growing public health importance in the country. Although no causal links have been established regarding the cause of the condition, associations with arsenic have been established (Johnson et al. 2012). This fact combined with the condition's prevalence in areas of high agricultural activity, has led to the postulation of a link with pesticide use. Patients (who are usually young) with the condition presented either with symptoms typical of CKD (such as tiredness) or with an acute-on-chronic picture. These patients are worked up with inconclusive findings and are then managed supportively.

The healthcare service's approach to renal replacement/transplant was interestingly different to what I was familiar with. Given the growing number of patients requiring dialysis, the dialysis units

are under increasing amounts of pressure. As a result, patients are encouraged to use the facilities of private hospitals, which come at considerable costs. This unfortunate issue of cost leads to patients prioritising the management of their health in financial terms. One transplant patient explained to me that despite all the risks of a renal transplant (which costs \$10,300USD), he made his choice because it was cheaper in the long run than the alternative, dialysis, which would cost \$800USD per month.

The issue of funding, however, is managed interestingly in Sri Lanka by the non-profit sector. Consultants and specialist nurses liaise with a variety of different charities (such as the Kidney Foundation, the President's Fund and the Women's Association) to ensure funding for the management of patients in the community and to fund transport to dialysis units if needed.

At government funded hospitals, despite patients being allocated slots for dialysis, patients end up receiving the therapy based on urgency. Although this system introduces further inconvenience into the lives of patients on dialysis, the approach aims to treat the sickest patients with priority.

In addition to dealing with patients with CKD, I was also able to observe the management of patients with acute kidney injury. The causes of AKI were more exotic compared to those I was used to, with patients developing the clinical condition secondary to snake bite and leptospirosis. The patients with these conditions were managed according to strict national guidelines. Patients with snakebite for instance, were usually managed by the administration of an anti-venom followed by dialysis if no response had been established.

The professors of the ward expressed an interest in investigating the use of biomarkers that may be used to identify AKI secondary to snakebite early. I was able to produce a literature review for this purpose, and suggested candidates including N-acetyl-glucosaminidase, which is raised soon after bites by Russel's viper (Wing- Aung et al. 1998, 1996), a common cause of snake bite leading to AKI (Herath et al. 2012).

I was fortunate to have had my elective shortly after my finals. Having revised for my exams, I was able to assist the local medical students with clinical examinations and provide informal tutorials on various topics in nephrology. This inspired me to create a website for the purpose of medical education, which I initially aimed to tailor to nephrology, but by the end of the elective had expanded to cover a range of topics of medicine and surgery. Although not finished as of yet, the skeleton of the website can be seen at [www.bitesizemed.info](http://www.bitesizemed.info).

In conclusion, I am thankful to have had the opportunity to complete my elective in Sri Lanka, studying the field of Nephrology. As well as providing me with interesting insights into the management of medical conditions in a developing country, the experience taught me to deal with various clinical challenges, such as communicating with and managing patients when a language barrier is present. The experience allowed me to further my knowledge in renal medicine, and I am thankful to Renal Association UK for contributing to the experience.

## **References**

Herath H, Wazil A, Abeysekara D, Jeewani N, Weerakoon K, Ratnatunga N, Bandara E, Kularatne S. (2012). Chronic kidney disease in snake envenomed patients with acute kidney injury in Sri Lanka: a descriptive study. *Postgrad Med J*. 88:138e142.

- I.K. Gooneratne, A. K. P. Ranaweera, N. P. Liyanarachchi, N. Gunawardane,1 and R. D. Lanerolle (2008) Epidemiology of chronic kidney disease in a Sri Lankan population. *Int J Diabetes Dev Ctries.* 28(2):60-64.
- S. Johnson, S.S. Misra, R. Sahu, P. Saxena. (2012). Environmental contamination and its association with Chronic KidneyDisease of Unknown Etiology inNorth Central Region of Sri Lanka. [http://www.cseindia.org/userfiles/sri\\_lanka\\_final\\_report.pdf](http://www.cseindia.org/userfiles/sri_lanka_final_report.pdf)
- Senevirathna L, Abeysekera T, Nanayakkara S, Chandrajith R, Ratnatunga N, Harada KH, Hitomi T, Komiya T, Muso E, Koizumi A. (2012) Risk factors associated with disease progression and mortality in chronic kidney disease of uncertain etiology: a cohort study in Medawachchiya, Sri Lanka. *Environ Health Prev Med.* 17(3):191-8
- Win-Aung, Aye-Kyaw, Tin-Win, San-Kun, Thin-Thin-Hlaing. (1996) Urinary NAG as an early indicator of renal damage in Russell's viper bite envenomation. *Trans R Soc Trop Med Hyg.* 90(2):169-72.
- Win-Aung, Khin-Pa-Pa-Kyaw, Baby-Hla, Saw-Sandar-Aye, Saw-Phone-Naing, Aye-Kyaw, Tin-Nu-Swe. (1998) Renal involvement in Russell's viper bite patients without disseminated intravascular coagulation. *Trans R Soc Trop Med Hyg.* 92(3):322-4.
- World Health Organisation. Global Health Expenditure Database. <http://apps.who.int/nha/database/PreDataExplorer.aspx?d=1>. 2013.