

Elective Report: The Management of Acute and Chronic Renal Disease - A View From Malaysia

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Introduction and Aims:

I undertook my four week elective placement in Sarawak general hospital, Kuching, Malaysia with the aim of exploring the management of acute and chronic renal disease within Malaysia and comparing this with my previous experience of renal medicine in the UK.

Nephrology management on the wards:

One of the key ways that I learnt about the practise of nephrology in Sarawak general hospital was by attending ward rounds led by the consultant nephrologist. The spectrum of renal disease in Malaysia has become increasingly similar to that of the UK with end stage renal failure (ESRF) as a result of diabetes and hypertension being the major concern but a number of renal conditions such as renal failure secondary to pyelonephritis and renal failure secondary to obstructive uropathy are still being seen more frequently than in the UK. This was illustrated by a patient we saw during a ward round, who had in the past undergone a nephrectomy as a result of obstruction occurring from renal calculi, and had presented again with deterioration in his remaining kidney function and signs and symptoms of obstruction. After imaging (ultrasounds, CT) had ruled out other causes of obstruction such as renal stones, renal, ureteric or bladder tumours, strictures or blood clots, it was decided that his obstruction was likely to be a result of bladder fibrosis that appeared to be secondary to TB, which the patient had suffered from in the past. TB, while relatively rare in the UK, is far more common in Malaysia (incidence is 82/100000 population compared to the UK 13/100000¹), as I witnessed during time I spent in infectious disease clinics in Sarawak general hospital. This patient's urinary obstruction was managed by the insertion of a urethral catheter. Afterwards weight, fluid balance and U&Es were monitored closely as it was explained to me by the consultant that following the relief of such obstructions there can be a large post-obstructive diuresis that requires fluid resuscitation and replacement of sodium and bicarbonate using sodium bicarbonate to manage the salt-losing nephropathy that may occur.

Amongst the patients we saw on the wards, lupus nephritis was a particularly common diagnosis. This is likely to be because, lupus is much more prevalent amongst Asians than it is in Caucasians and Malaysia has a predominantly Asian population. Management of these patients involved confirming the diagnosis by renal biopsy, controlling blood pressure using ACE inhibitors, and also the use of hydroxychloroquine, corticosteroid therapy and immunosuppressive agents.

I saw a number of patients who presented with nephrotic syndrome (consisting of a triad of oedema, hypoalbuminaemia, proteinuria) but management was different to what I had experienced in the UK in that only those with suspected SLE underwent a biopsy. Since minimal change glomerulonephritis is the leading cause in Malaysia and management options are similar for other diagnoses, patients are generally treated with corticosteroid therapy.

Renal replacement therapy:

One of the ways in which both acute and chronic renal disease may be managed is through dialysis and I saw a number of patients on the wards in Sarawak general hospital undergoing haemodialysis or peritoneal dialysis. I discovered through discussions with the consultant nephrologists that haemodialysis facilities are limited in Malaysia and therefore patients are often placed on intermittent peritoneal dialysis while awaiting haemodialysis. Haemodialysis is ideally carried out, as in the UK, through a surgically created fistula. However, such fistulas take many weeks to mature and can be prone to complications: one patient I saw had experienced thrombosis of their brachio-cephalic fistula and required dialysis through a central venous catheter whilst awaiting repair. I had the opportunity to witness the insertion of the catheter into the internal jugular vein being carried out and it was similar in process to what I had observed in the UK, but somewhat less sterile, with an apron being worn rather than a sterile gown. Since the catheter needed to be left in for 3-4 months, it represented a significant infection risk and this patient was therefore given prophylactic antibiotics. Other dialysis complications I witnessed included disequilibrium syndrome and CAPD peritonitis, which is particularly frequent in patients living in the rural village longhouses so these patients are usually encouraged to attend hospital for haemodialysis instead of CAPD. I also attended dialysis clinics where I learnt about how patients are monitored and treated for disturbances in Ca^{2+} , PO_4^- , Hb and Fe alongside their dialysis. These clinics were also remarkable for being carried out with two consultations going on in the same consulting room (due to a lack of facilities) and for the different languages used: English between doctors and in the notes, Malay to the Malays patients and Mandarin to those of Chinese origin (a significant proportion of the population).

I was informed that the average length of time for a patient to be on dialysis in Malaysia is approximately 11 years, which is considerably greater than what it is in the UK. Indeed, I saw one patient in Malaysia who had been on dialysis waiting for a transplant for 15 years. This largely appears to be a result of a deficiency in kidney donation relative to the UK. Previous to the introduction of dialysis in Malaysia, live donation for transplantation was relatively common, usually from a first degree relative. In fact, I saw one case of a man who attended renal clinic for a check up on his remaining kidney function following his kidney donation to his brother many years previous. However, since the advent of dialysis, it appears live transplantation has fallen, as it is not necessarily seen as a life-saving treatment

any more. Whilst cadaveric donation is on the rise, it is a long way off from meeting the current demand for transplantation in Malaysia.

Conclusion:

The four weeks of placement enabled me to have a fulfilling learning experience where I developed an understanding of the practise of nephrology in Malaysia and an appreciation for the operation for the healthcare system as a whole as well as the opportunity to further my professional development. The valuable knowledge, understanding and skills I have acquired in this foreign medical environment will hopefully influence my practise of nephrology as a doctor and enhance my future medical career.

References:

1. World Health Organization (WHO) estimates of tuberculosis incidence by country [online] 2010 [cited 2012, Jul 17]. Available at URL: http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733837507