

## EDITORIAL

## Renal disease in Malaysia: problems and prospects

In 1960, the American Medical Association had not yet recognised nephrology as a specialty. Over the past thirty years, nephrology has developed into a major subspecialty, leading as a pioneer in the field of organ replacement therapy and transplant technology. In 1984, it was estimated that over 200,000 people worldwide were kept alive by chronic haemodialysis, continuous ambulatory peritoneal dialysis (CAPD) or renal transplants.<sup>1</sup>

The true incidence of renal disease in Malaysia is not known. Patients often present late, and only when symptomatic. More than half of 174 patients with end-stage renal disease (ESRD) treated by the Department of Nephrology, General Hospital, Kuala Lumpur in 1982, presented for the first time as uraemia with no known renal disease in the past.<sup>2</sup> In the same series, the known causes of chronic renal failure in order of frequency were glomerulonephritis, diabetic nephropathy, obstructive uropathy, chronic pyelonephritis, lupus nephritis, malignant hypertension, gouty nephropathy and polycystic disease.

In view of the undesirable outcome, the emphasis should be on early detection of renal disease so that with appropriate management, progressive renal failure may be prevented or ameliorated. The best clue to renal disease is urinalysis. In the hospital setting, examination of the urine is the most frequently utilised of all clinical tests and perhaps the simplest. However it has to be carried out properly to provide a meaningful result. Sir Robert Hutchison used to say that the ghosts of dead patients that haunt us will not ask why we did not employ the latest fad of clinical investigation but rather "Why did you not test my urine?"<sup>3</sup> The general practitioner (G.P.) is the first-line contact of patients for many trivial ailments. If urinalysis is done routinely in G.P. clinics and primary health centres, asymptomatic proteinuria, haematuria, pyuria and bacteriuria could be picked up early and referred for appropriate investigations. Urine examination should be an integral part of any medical examination.

The therapy of established glomerular disease is generally disappointing. The pathogenesis of most forms of primary glomerulonephritis still eludes us, and therapy is usually ineffective except in minimal change glomerulonephritis. Immunosuppressive therapy and plasma exchange have been useful in lupus nephritis and rapidly progressive glomerulonephritis.

Preventable causes of renal disease need to be identified. Chronic renal failure due to diabetes mellitus is a major problem.<sup>4</sup> Good glycaemic control, appropriate anti-hypertensive therapy and restriction of dietary protein may protect against diabetic nephropathy.<sup>5</sup> Once there is clinically detectable proteinuria, progressive deterioration of renal function occurs. Preventive intervention should be instituted before that stage. Uncontrolled hypertension leads to renal damage and chronic renal failure. Since in Malaysia, we do not have a regular "family doctor" system, often hypertensive patients are non-compliant and only present when there is target organ damage. There needs to be greater public education especially through the mass media, so that diabetes and hypertension are detected early, and there is compliance with therapy.

Obstructive uropathy in adults is usually caused by urinary calculi. In 1980, the incidence of urinary calculi in Malaysia, was estimated at 34.9 per 100,000 population.<sup>6</sup> During a two-year

period between 1984 and 1986, 216 patients in Kelantan had surgery for urinary calculi.<sup>7</sup> The management of renal calculi has been revolutionised in recent years by developments in lithotripsy and surgery. There are a number of private medical centers promoting these services. Whether surgery or extracorporeal shockwave lithotripsy is used to relieve the obstructive uropathy, the patient should be assessed for any biochemical or metabolic imbalance predisposing to stone formation. Recurrence of stone disease occurs in 60% of adults within 9 years of the initial episode.<sup>8</sup> It is a challenge to reduce the high recurrence rate of this painful condition. Therefore identification and treatment of predisposing causes are important, to prevent recurrence and ESRD. Analgesic nephropathy is another preventable cause of renal disease. Doctors need to be aware of this disease entity. In Malaysia, seven cases of analgesic nephropathy due to paracetamol alone were documented.<sup>9</sup> Stricter legislation regarding sale of analgesics is needed, and greater public awareness that even mild analgesics in excess, can cause nephropathy.

It is now appreciated that some of the causes of end-stage renal failure in adults, have their origins in childhood renal disease. Reflux nephropathy (chronic pyelonephritis) is an important cause of severe hypertension and end-stage renal failure in young adults. Urinary tract infection in early childhood together with associated vesico-ureteric reflux leads to renal scarring or reflux nephropathy.<sup>10</sup> It is important therefore to diagnose childhood urinary tract infections and investigate for vesico-ureteric reflux with a micturating cystourethrogram. Children with vesico-ureteric reflux should be placed on long-term low dose antibiotic prophylaxis to prevent recurrent urinary tract infection and progressive renal scarring. It is important that GPs, who treat most of the children with suspected urinary tract infection, have access to urine culture techniques. The dipslide<sup>11</sup> should be encouraged and negotiations made, to bring the current local price down to a level acceptable to general practitioners. Alternatively hospital laboratories should be made accessible to general practitioners.

Every case of childhood urinary tract infection should be investigated radiologically for underlying congenital anomalies and vesico-ureteric reflux. It is found that 35–50% of childhood urinary tract infections are associated with underlying structural abnormalities of the urinary tract.<sup>12</sup>

Poststreptococcal nephritis is another common renal disease especially among children in this country.<sup>13</sup> Although it was thought to have a benign long-term prognosis, studies by Baldwin and others have shown the development of hypertension, proteinuria, glomerular sclerosis and chronic renal failure in a proportion of patients, several years after apparent clinical recovery from the acute episode.<sup>14</sup> In Kelantan, about 600 cases of acute nephritis were admitted to the University Hospital, in the four-year period between 1986 and 1990. This is similar to the picture in Singapore 30 years ago, when acute poststreptococcal nephritis was endemic there.<sup>15</sup> The Singaporean experience, as well as that of other developed countries, show that streptococcal infection and poststreptococcal nephritis can be eradicated by improved social conditions. In view of its potential chronicity, serious efforts should be made to reduce the incidence of poststreptococcal nephritis, by accelerated socio-economic development of the community.

The major concern regarding renal disease in this country is end-stage renal failure. Due to increased publicity in the mass media in recent years, the expectations of the public are high. What is often not realized are the financial costs and limitations of renal replacement therapy. Integrated treatment of ESRD by chronic dialysis and renal transplantation has been practised in Malaysia since 1976.<sup>2</sup> Selection criteria for treatment by chronic haemodialysis are those with suitable living-related kidney donors, patients with failed renal transplants and those trained for self-haemodialysis at home. The patient, his family or employer generally has to pay for the treatment.<sup>16</sup>

Currently in spite of the haemodialysis facilities available at the General Hospital, Kuala Lumpur and satellite units at peripheral General Hospitals, there is a waiting list. What is more important is that a large proportion of end-stage renal failure patients cannot afford to pay for chronic dialysis. It costs approximately one thousand dollars monthly to pay for maintenance haemodialysis or CAPD (not including the haemodialysis machine or service charges). A developing country like Malaysia has to pay attention to health priorities. Infectious diseases, maternal and child health services and primary health care are greater priorities.

Transplantation provides better quality of life than chronic dialysis. Unfortunately in Malaysia, we have only a living-related donor programme, and very often relatives are afraid and unwilling to donate their kidneys. To-day there is also evidence that there may be deleterious effects on the residual kidney of the donor.<sup>17</sup> With proper selection, expertise and adequate facilities the results can be better. It is for the medical institutions in the country to develop centres of excellence, so that the afflicted can be served better without having to go elsewhere.

The will for survival is very great. It has led to the sale of organs by living donors in impoverished countries. It has also led to living non-related kidney transplantation under doubtful circumstances. This practice is universally condemned, for it is often based on the exploitation of the poor, and the preparation prior to transplant as well as follow-up care of donor and recipient are questionable under these circumstances. There are patients in Malaysia, who appeal through the newspapers for funds to enable them to undergo such a transplant overseas and very often, the generous Malaysian public responds. Such appeals should be referred to the National Kidney Foundation, so that appropriate advice is given and public funds are not misused. The call by the President of the MMA to build up confidence in our systems and expertise is timely. It is heartening to know that the MMA has set up a Medical Advisory Committee to assist in the assessment of those needing care.<sup>18</sup> Transplantation does not provide a magical cure: life-long immunosuppressive therapy is needed and there is always the threat of rejection.

In Asia cultural attitudes have prevented the development of a viable cadaveric programme unlike the West. Singapore introduced the opting-out law, but this may not be the answer for us. There is a necessity to develop a cadaveric transplantation programme in Malaysia. Cultural attitudes can be changed but it requires effort and time. There should be a sustained campaign through the mass media. Public service organisations should be recruited to spread the message in the community.

The people who need to be convinced most are doctors themselves. Perhaps the doctors should initiate the programme by signing the donor cards first. In Japan at the 19th Congress of the Japanese Society of Transplantation, physicians and surgeons were asked to sign donor cards. Perhaps the MMA could consider similar lines of action at its next AGM. This should not be much of a problem, as we have a successful "Look East" policy.

## References

1. Schreiner GE. Foreward. In: Suki WN, Massry SG (eds). *Therapy of renal disease and related disorders*. Martin Nijhoff, 1984: V-VI.
2. Suleiman AB, Jeyandran S, Morad Z, Kong CT. Outcome of patients with chronic renal failure: review of patients presenting over a one-year period. *Med J Malaysia* 1984; 39: 225-8.
3. Mason S, Swash M. Hutchison's clinical methods. ELBS 1980: 132.
4. Mustaffa E. Diabetes in Malaysia: problems and challenges. *Medical J Malaysia*, 1990, 45 (1): 1-7
5. Tuttle KR, Stein JH, DeFronzo RA. The natural history of diabetic nephropathy. *Seminars in Nephrology* 1990; 10(3): 184-93.
6. Sreenevasan GA. A romance with urology in Malaysia. *Med J Malaysia* 1986, 41: 239-49.
7. Lim KG, Edward RH, McAll GLG, Mya Thaug, Wahab NA, Arumainayagam G. Urinary stones in Kelantan, Malaysia - a two year review. *Sing Med J* 1988; 29: 353-6.
8. Coe FL, Farus MJ. Disorders of stone formation. In Brenner BM, Rector FC (eds): *The Kidney*, Ed 3 Philadelphia, WB Saunders 1986: 1403-42.
9. Segasothy M, Cheong I, Kong BCT, Suleiman AB, Morad Z. Further evidence of analgesic nephropathy in Malaysia. *Med J Malaysia* 1986; 41: 377-9.
10. White RHR. Vesicoureteric reflux and renal scarring. *Arch Dis Child* 1989; 64: 407-12.
11. Arneil GC, McAllister TA, Kay P. Detection of bacteriuria at room-temperature. *Lancet* 1970: 119-21.
12. Smellie JM, Hodson CJ, Edwards D, Normand ICS: Clinical and radiological features of urinary infection in childhood. *Br Med J* 1964; ii: 1222-6.
13. D'Cruz F, Lau YF. Acute poststreptococcal nephritis: a review of 220 children. Abstracts: First International Congress of Tropical Paediatrics, Bangkok 1987.
14. Baldwin DS, Melvin G, Gluck MC, Schacht RG, Gallo S. The long-term course of post-streptococcal glomerulonephritis. *Ann Intern Med* 1974; 80: 342-58.
15. Paul FM. A study of acute nephritis in Singapore children. *Journal Sing Paed Soc* 1963; 5: 54-60.
16. Suleiman AB. Developing the haemodialysis programme in Malaysia. *Proceedings of the sixth Asian colloquium in nephrology*, 1985: 249-55.
17. Rose BD, Brenner BM. Mechanisms of progression of renal disease. In: Rose BD (ed). *Pathophysiology of renal disease*. McGraw-Hill, 1987: 119-37.
18. Presidents column, *MMA Newsletter*, 1990, 22:3

Dr. Fabiola D'Cruz, MMed (S'pore), MRCP (UK); Professor N. Chandrasekharan, Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan.