

# OUTCOME OF PATIENTS WITH CHRONIC RENAL FAILURE: REVIEW OF PATIENTS REPRESENTING OVER A ONE-YEAR PERIOD

ABU BAKAR SULEIMAN  
S. JEYAINDRAN  
ZAKI MORAD  
KONG C.T.

## SUMMARY

*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 in uraemia, with no known renal disease in the past. Although about half of all patients seen in 1982 were treated by dialysis or transplantation, the great majority of the estimated number of patients developing ESRD in Malaysia in 1982 did not receive definitive treatment.*

## INTRODUCTION

End stage renal disease (ESRD) without definitive treatment is invariably fatal and median survival has been reported to be 55 days.<sup>1</sup> Treatment of ESRD is very expensive, and is only widely available in the developed countries. Integrated treatment of

ESRD by recurrent dialysis and renal transplantation has been practised in this country since 1976. Patients accepted for chronic haemodialysis are those with suitable living related kidney donors, patients with failed renal transplants, and those whose employers or families could pay for treatment on chronic haemodialysis.

A review of all patients with ESRD treated at the Department of Nephrology, General Hospital Kuala Lumpur, during 1982 was carried out to document the number of patients seen in this department, the aetiology and clinical presentation of ESRD, the form of treatment provided and the clinical progress of the patients upto 30 June 1983.

## PATIENTS AND METHODS

The case notes of all patients presenting with ESRD in 1982 were reviewed. ESRD was defined as the presence of chronic renal disease with serum creatinine persistently above 800  $\mu\text{mol/l}$ , with clinical progression of the disease despite correcting reversible factors such as salt depletion, outflow tract obstruction, poorly controlled hypertension, cardiac failure and infections. Patients whose serum creatinine improved to remain persistently below 800  $\mu\text{mol/l}$ , after correction of reversible factors, were excluded from this review.

Definitive treatment available included living related donor kidney transplantation and chronic

---

Abu Bakar Suleiman  
Consultant Nephrologist and Head

S. Jeyaindran  
Medical Officer

Zaki Morad  
Consultant Nephrologist

Kong C.T.  
Registrar in Nephrology

Department of Nephrology  
General Hospital, Kuala Lumpur

---

dialysis. A few patients were put on chronic intermittent peritoneal dialysis, while awaiting chronic haemodialysis or renal transplantation. Patients who could not be offered definitive treatment were treated conservatively, and peritoneal dialysis was performed occasionally for relief of symptoms. The indications for dialysis were made on clinical grounds.

## RESULTS

Of the 174 patients with ESRD in 1982, 119 were males and 55 females. There were 78 Chinese, 63 Malays, 30 Indians and three patients of other races. The age distribution is shown in Table I, and the referral pattern in Table II. The majority of patients were referred from other government hospitals.

TABLE I  
AGE OF PATIENTS WITH ESRD IN 1982

Age (Years)	Number of patients
<9	4
10 - 19	5
20 - 29	36
30 - 39	40
40 - 49	42
50 - 59	29
60 - 90	13
>70	6

TABLE II  
ORIGIN OF PATIENTS REFERRED WITH ESRD

Origin of referrals	Number of patients
General Hospital, Kuala Lumpur	22
Medical unit	: 20
Surgical unit	: 1
Maternity unit	: 1
Other government hospitals	104
University Hospital	5
Private hospitals	34
General Practitioners	9
Total	174

## Clinical presentation

Clinical symptoms of uraemia were present in 164 out of the 174 patients. 75 patients were known to have chronic renal disease and were on treatment and follow-up; however 92 patients were not known to have chronic renal disease, or any previous significant illness before presenting for the first time with uraemia. ESRD was detected in four patients on routine medical examination, in two patients after complaints of generalised pruritis, and in one patient after complaints of headache. No other symptoms of uraemia were present in these seven patients at the time of presentation.

## Complications of uraemia

Pericarditis or pericardial effusion were detected in 15 patients, pleural effusion in 13, and cerebrovascular accidents in four patients. The peripheral neuropathies were all mild, consisting mainly of sensory loss in both legs.

## Aetiology

In 78 patients, no definitive diagnosis could be made as they all presented for the first time in ESRD, with bilateral contracted kidneys, and were classified as end stage renal disease of undetermined aetiology. Glomerulonephritis was diagnosed in 53 patients, from renal biopsy evidence or from known clinical course of glomerulonephritis, and rapidly progressive glomerulonephritis was seen in two patients. Diabetic nephropathy caused uraemia in 16 patients. Other causes are shown in Table III.

## Clinical course

At the time of presentation, 139 patients had serum creatinines exceeding 1000  $\mu\text{mol/l}$ , 35 exceeding 800  $\mu\text{mol/l}$ .

At the time of review, 78 patients had received definitive treatment, 17 patients had been transplanted and 61 were treated on chronic dialysis. Of the patients on chronic dialysis, five were on chronic

**TABLE III**  
**CAUSES OF CHRONIC RENAL FAILURE**

End stage renal disease	78
Chronic glomerulonephritis	51
Diabetic nephropathy	16
Obstructive uropathy	11
Chronic pyelonephritis	4
Lupus nephritis	4
Rapidly progressive glomerulonephritis	2
Malignant hypertension	2
Gouty nephropathy	2
Polycystic disease	1
Others	3
<b>Total</b>	<b>174</b>

haemodialysis and four were on chronic intermittent peritoneal dialysis. The other 59 patients were treated conservatively, and 37 patients had died, while on conservative treatment.

The median survival of the 37 patients who died was 55 days, from the time of presentation. The median duration before commencement of chronic haemodialysis for the 78 patients was 111 days. The median survival of patients on conservative treatment up to the time of review was 75 days.

## DISCUSSION

Clinical symptoms of uraemia were present in 164 patients (94%) at the time of presentation. However 92 patients (53%) had presented for the first time in uraemia with no past history of ill health or known renal disease. This may reflect the insidious nature of their renal disease, but it is well known that patients with chronic renal failure may remain free of symptoms of uraemia until they are in ESRD.<sup>2</sup>

The complications at presentation are well known to occur in advanced chronic renal failure. Pericardial and pleural effusions were detected on clinical examination and subsequent investigations, and the lack of systemic signs and symptoms despite its presence is well known.<sup>2,3</sup> Peripheral neuropathies were mild and were no longer detectable after being started on regular dialysis.

The incidence of ESRD in Malaysia is not known, but is probably similar to that reported in other countries. If it is estimated that about 50 per million population per year develop ESRD,<sup>4</sup> then in a population of 13 million, there would be upto 650 new patients with ESRD in Malaysia annually. The 174 patients seen at this department represents 26.7% of the estimated number of patients expected to develop ESRD in 1982. In 1982, 78 out of 174 patients (44.8%) received definitive treatment for their ESRD. Although nearly half of all patients presenting with ESRD to this department in 1982 received definitive treatment, this actually only represents a small proportion (12%) of the estimated number of patients likely to develop ESRD in Malaysia in 1982.

At the time of review, 21.3% patients were known to have died, while 33.9% were still alive on conservative treatment. Maher<sup>5</sup> had reported a median survival of 68 days in 36 patients after serum creatinine exceeded 1000  $\mu\text{mol/l}$ , and an interval of 51 days to the first dialysis in 76 others. He also reported that one peritoneal dialysis increased survival significantly. In this series, 59 patients on conservative treatment remain alive six months later, which is consistent with Maher's observations, although in our series patients whose renal function on correction of reversible factors, improved to serum creatinine below 800  $\mu\text{mol/l}$ , were excluded from this review.

In managing patients with chronic renal failure, although most patients will eventually require chronic dialysis or renal transplantation as definitive treatment, it is most important that reversible factors such as obstruction, infections, and salt and water depletion be looked for carefully, and corrected appropriately. Peritoneal dialysis should also be performed, if necessary at least once, as this may delay the need for initiating maintenance dialysis or prolong life for a useful period, when there are no prospects of definitive treatment.<sup>5</sup>

In conclusion, over a quarter of the estimated number of patients expected to develop ESRD in

TABLE IV  
CLINICAL COURSE OF PATIENTS WITH ESRD  
AT TIME OF REVIEW

Clinical Course	No. of patients
Definitive treatment:	78
renal transplant	17
chronic dialysis	61
Conservative treatment	58
Died	37
Total	174

Malaysia in 1982 were treated in this department. However, only a small proportion of the total estimated number of patients with ESRD in 1982 received definitive treatment. With the limited availability of living related kidney donors, and the lack of cadaver kidneys for transplantation, more patients with ESRD in this country can only be treated definitively, if the capacity of the dialysis facilities in this country is increased substantially.

## ACKNOWLEDGEMENT

The authors thank the Director-General of Health, Malaysia for permission to publish this paper.

## REFERENCES

- 1 Maher JF, Bryan CW, Ahearn DJ. Prognosis of chronic renal failure. *Arch Int Med* 1975; 35: 273-278.
- 2 Ledingham JGG. Chronic renal failure. In Black DAK, Jones NF, ed. *Renal Disease*, 4th edition. Blackwell Scientific Publications 1979; 16: 495-496.
- 3 Seldin DW, Carter NW, Rector FC. Consequences of renal failure and their management. In Strauss MB, Welt LB, ed. *Diseases of the Kidney*. Boston: Little Brown and Co. 1971; 6: 240.
- 4 Office of Health Economics. *Renal Failure - A Priority in Health*. London office of Health Economics, 1978.
- 5 Maher JF, Nolph KD, Bryan CW. Prognosis of advanced chronic renal failure. *Ann Int Med* 1974; 81: 43-47.