

(tetracycline) may fail to reduce the duration of fever to less than five days.<sup>4</sup> That our patients felt well and had a normal temperature 48-72 hours after starting erythromycin suggests that the drug helped resolve the disease in all cases.

Erythromycin is thought to be the most effective antibiotic for legionnaire's disease and mycoplasma pneumonia, both of which are easily confused with Q fever radiologically and clinically. If erythromycin is as effective in treating Q fever as it appears to have been in these cases, it would simplify the approach to non-bacterial pneumonias and provide another drug for treating chronic Q fever.

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<sup>1</sup> Ormsbee, R A, Parker, H, and Pickens, E C, *Journal of Infectious Diseases*, 1955, **96**, 162.

<sup>2</sup> Turck, W P G, and Matthews, W B, *British Medical Journal*, 1969, **1**, 185.

<sup>3</sup> Freeman, R, and Hodson, M E, *British Medical Journal*, 1972, **1**, 419.

<sup>4</sup> Clark, W H, and Lennette, E H, *Annals of the New York Academy of Sciences*, 1952, **55**, 1004.

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## Psychiatric disturbance and chronic haemodialysis

Despite extensive discussion of the psychiatric problems associated with dialysis, few systematic studies have been carried out and few data exist on the effects of hospital as opposed to home dialysis. I have examined the psychiatric symptoms of patients attending a renal unit that does not select patients on social or psychiatric criteria.

### Patients, methods, and results

Patients attending the medical renal unit, Royal Infirmary of Edinburgh, were assessed on their first attendance after the start of the study. Eighty-five patients were assessed (mean age 43.3 (range 18-67) years), and six others were excluded (four for medical reasons, two because they could not follow instructions). The mean duration of dialysis was 3.03 years (range 2 months to 13.7 years).

The General Health Questionnaire (GHQ)<sup>1</sup> and Middlesex Hospital Questionnaire (MHQ)<sup>2</sup> provided objective and repeatable assessments. The GHQ gives an overall index of psychiatric disturbance, whereas the MHQ assesses anxiety, phobic anxiety, obsessionality, somatic anxiety, depression, and hysterical personality. Comparisons were made within the group for age, sex, and mode of treatment (home versus hospital dialysis), results obtained with both questionnaires were compared with normative data.

The mean GHQ score was 7.4 (SD 9.2), which is not significantly different from normative data obtained in consecutive attenders at a general practice surgery.<sup>1</sup> The effects of age, sex, and mode of treatment were not significant. The recommended cutting score (11/12) was used to classify patients as "probable psychiatric cases" or "probable normals." There were 19 probable psychiatric cases (10 men and nine women), five receiving hospital dialysis and 14 home dialysis. These differences were not significant. The prevalence of 22.4% probable psychiatric cases is similar to the 21.6% obtained in a random sample of general-practice patients<sup>3</sup> and 20.29% in newly registered general-practice patients.<sup>4</sup>

MHQ scores were not significantly different from normative data obtained in general-practice patients<sup>5</sup> for anxiety, phobic anxiety, depression, and hysterical personality, but patients receiving dialysis had more somatic symptoms (5.8 v 5.0,  $t=1.98$ ,  $P<0.05$ ) and obtained lower scores for obsessionality (6.2 v 7.1,  $t=2.72$ ,  $P<0.01$ ). Patients receiving dialysis scored significantly lower than psychiatric outpatients for all subscales.<sup>2</sup> Women scored higher than men for anxiety, phobic anxiety, somatic symptoms, and depression (table). The mode of treatment significantly affected only the depression subscale, patients receiving home dialysis scored higher ( $P<0.05$ ). Age effects were not significant.

Scores of probable psychiatric cases were significantly higher than those of probable normals on all subscales except hysterical personality and did not differ significantly from those of psychiatric outpatients,<sup>2</sup> except that the mean was higher on the somatic subscale (9.6 v 7.3,  $t=2.84$ ,  $P<0.01$ ).

### Comment

The most interesting findings are that the prevalence of psychiatric symptomatology in patients receiving haemodialysis is similar to that in general-practice patients, and that dialysing patients at home rather than in hospital does not seem to affect psychiatric morbidity significantly, although such patients had slightly more depressive symptoms. The low prevalence of psychiatric disturbance found in this study differs from that reported by many investigators. Yet I studied a large sample of patients, included all patients who could be assessed (93.4%), and used standardised questionnaires. The reason for this discrepancy is not patient selection, since the studied unit rarely rejects patients and then only because of medical problems. Faced with a major problem such as dialysis, most patients respond well but are, perhaps, obscured by the few who react adversely. Finally, the unit studied is well established and has several social workers and readily available psychiatrists, all of which may help to reduce psychiatric symptoms.

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<sup>1</sup> Goldberg, D P, *The Detection of Psychiatric Illness by Questionnaire*. London, Oxford University Press, 1972.

<sup>2</sup> Crown, S, and Crisp, A H, *Manual of the Middlesex Hospital Questionnaire (MHQ)*. Barnstable, Psychological Text Publications, 1970.

<sup>3</sup> Goldberg, D P, Kay, C, and Thompson, L, *Psychological Medicine*, 1976, **6**, 565.

<sup>4</sup> Corser, C M, and Philip, A E, *British Journal of Psychiatry*, 1978, **132**, 172.

<sup>5</sup> Crisp, A H, and Priest, R G, *British Journal of Psychiatry*, 1971, **119**, 385.

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*Distribution of probable psychiatric cases, and mean scores on General Hospital Questionnaire (GHQ) and Middlesex Hospital Questionnaire (MHQ) subscales according to sex and whether dialysis given at home or in hospital*

	No of probable psychiatric cases	No of probable normals	GHQ	MHQ subscales					
				Anxiety	Phobic anxiety	Obsessionality	Somatic symptoms	Depression	Hysterical personality
Men	10	46	6.7	2.9	2.4	6.0	5.1	3.0	3.0
Women	9	20 (NS)	8.8 (NS)	5.6**	5.0**	6.5 (NS)	6.9*	5.0**	3.0 (NS)
Hospital dialysis	5	29	5.6	3.3	3.1	5.3	5.4	2.7	2.6
Home dialysis	14	37 (NS)	8.4 (NS)	4.0 (NS)	3.5 (NS)	6.6 (NS)	6.0 (NS)	4.2*	3.3 (NS)
Probable psychiatric cases			21.7	8.0	4.4	8.0	9.6	6.8	3.8
Probable normals			3.3**	2.8**	3.1*	5.7**	4.8**	2.9**	2.8 (NS)
All patients	19	66	7.4	3.9	3.3	6.2	5.8	3.7	3.0

\*Differences between means:  $P<0.05$ .

\*\*Differences between means:  $P<0.01$ .

NS = Difference not significant.