Erythrocyte Sedimentation Rate and Related Factors in End-Stage Renal Failure

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Dear Sir,

The erythrocyte sedimentation rate (ESR) has previously been shown to be significantly elevated in patients with chronic renal failure including end-stage renal disease (ESRD), but not to correlate directly with the aetiology of the renal disease, the duration of dialysis, or the type of dialysis membrane used [1, 2].

To ascertain whether the chronic interstitial changes common to all severe renal diseases [3], or the uraemic environment, cause the elevation of the ESR in ESRD, we compared the ESR and haemoglobin levels in 18 subjects who retained their original kidneys (nephric patients) and 18 who had undergone bilateral nephrectomy (anephric patients), matched for age, sex and method of dialysis. Plasma fibrinogen levels were also measured in 16 subjects in each group.

There was no significant difference in the ESR, the haemoglobin or plasma fibrinogen levels between the nephric and anephric patients (table 1). The ESR and plasma fibrinogen levels did, however, correlate. Furthermore, whereas the haemoglobin and plasma fibrinogen levels were higher in the 26 patients receiving continuous ambulatory peritoneal dialysis than in the 10 patients receiving maintenance haemodialysis, there was

no significant difference in the ESR between the two dialysis groups.

It is the uraemic environment, therefore, which results in the elevation of the ESR in ESRD.

Chronic inflammatory changes in the diseased kidneys are not the principle cause of abnormalities in the ESR, haemoglobin or plasma fibrinogen levels.

References

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