

Erythrocyte deformability in dialysed and non-dialysed uraemic patients.

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Abstract

In thirty-one uraemic patients, fourteen on conservative treatment and seventeen on long-term haemodialysis, erythrocyte deformability, measured as filtration half-time in a paper filtration experiment, was studied. The two groups were comparable concerning age, sex and kidney disease. Although the mean filtration half-time for erythrocyte suspensions was normal in non-dialysed patients there was a positive linear correlation (P less than 0.01) between serum creatinine and filtration half-time in this group. Filtration half-time was increased in dialysed patients, indicating impaired deformability in the latter (P less than 0.001). Filtration half-time showed a good inverse correlation with the packed red cell volume in the non-dialysed (P less than 0.001) and in the dialysed group (P less than 0.01). As pre- and post-dialysis filtration half-times were the same, it appeared that the more severe uraemic state of dialysed patients was responsible for the impairment of erythrocyte deformability and not the dialysis procedure itself.