

ACUTE ELEVATIONS OF CRP ARE COMMON IN HD PATIENTS, USUALLY EXPLAINABLE AND PREDICTIVE OF POOR SURVIVAL.

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C Reactive Protein (CRP) is an acute phase protein and is a marker of systemic inflammation. It is said to be chronically elevated in dialysis, especially haemodialysis patients.

Low resolution CRP was measured monthly on a routine basis in 225 unselected haemodialysis patients and also according to clinical needs. All patients received high flux dialysis with biocompatible membranes and ultra pure water. The majority, especially those without residual renal function received haemodiafiltration. Both baseline CRP pattern and acute elevations (spike load) were analysed. Minimum follow up was 12 months.

The vast majority (82.7%) of patients had normal or near normal baseline CRP levels ($\leq 10\text{mg/L}$). Of the common causes of raised CRP only connective tissue diseases [CTD] ($p=0.025$) and chronic infection ($p=0.056$) were associated with high baseline values. The presence of CTD was also associated with high spike loads. Diabetes and vascular disease did not affect either the baseline or spike load.

All 225 patients had at least 1 acute CRP spike with a mean of 3.8 spikes per patient. The majority of these (80.6%) could be explained by infections or other intercurrent events.

High baseline CRP was associated with high mortality but this did not reach statistical significance by Log Rank test. High CRP spike load however was a strong predictor of mortality ($p=0.001$). This adverse effect on survival persisted when corrected for age, diabetes, other comorbidity and unplanned start of dialysis in a Cox regression analysis.

Baseline CRP levels are normal or near normal in the majority of high flux HD patients. Acute elevations were common and usually related to identifiable factors. High CRP load is a marker of poor survival and therefore routine monitoring of CRP may be beneficial.