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P284 -Impact of Short-Term Change from Haemodiafiltration to High-Flux Haemodialysis on Phosphate Control

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Introduction: High-flux haemodialysis (hf-HD) remains the principle means for delivering haemodialysis (HD) in the United Kingdom, however Haemodiafiltration (HDF) is now more widely available and there is debate surrounding the potential advantages of HDF over hf-HD. It is well recognized that the convective element of HDF improves middle-molecule clearance and there is some evidence in small scale studies that it is associated with better phosphate control although this has not yet been confirmed in larger trials. Improved phosphate clearance could contribute to the cost effectiveness of HDF by use of less phosphate binders which have a cost of approximately £9.5 million per annum to primary care. In addition, there may be improved quality of life for patients via less onerous dietary restrictions. We investigated the impact of an enforced switch to from HDF to hf-HD on phosphate control and other biochemical parameters.

Methods: Due to water plant changes at a single satellite unit, an enforced switch from regular HDF to hf-HD was made on the 7th August 2018. This period lasted until 10th January 2019 with a brief period of HDF provided during October. We retrospectively compared monthly blood results from this period and compared them to the preceding four months.

Results: 80 patient monthly blood results were analysed for the period from April to December 2018, patients were excluded if they started dialysis or had a significant hospitalisation during the study period. In total 66 patients were included. During the period in which patients were switched to hf-HD there were no significant changes in the number of sessions lasting 240 minutes, the percentage of sessions reaching a blood flow of over 350ml/min or the percentage of sessions where the patient was dialysed via a fistula or graft. Median phosphate levels over this period are shown in figure 1.

Median phosphate level during the hf-HD period was 1.58mmol/L compared with 1.47mmol/L in the 4 months before the change. In the same period the percentage of patients with a phosphate less than or equal to 1.79mmol/L declined from an average of 74.4% to an average of 67%. There were no changes noted in median serum calcium or haemoglobin levels.

Conclusion: Our experience of an enforced switch from HDF to hf-HD was associated with a small rise in serum phosphate levels in a cohort of prevalent dialysis patients. While the short term clinical significance of this is limited as the centre has now switched back to HDF, our experience suggests that HDF may confer small benefits in terms of phosphate control which may have implications for tablet burden and, potentially, patient quality of life.