

P313

P313 -A quality improvement project on the management of serum phosphate levels in adult haemodialysis patients, focusing on patient education and intensive renal dietetic review

Miss Jaimeet Jassal¹

¹*Barts Health NHS Trust, London, United Kingdom*

Introduction: The Renal Association (2015) states a target range for serum phosphate in dialysis patients of 1.1-1.7 mmol/l. In October 2017, only 57% of haemodialysis (HD) patients in the cohort (n=50) studied achieved this target. There is a clear association between hyperphosphataemia and mortality in HD patients. The aim of this project was to explore the barriers and facilitators to management, and increase the percentage of patients in this cohort with serum phosphate levels within the target range, by September 2018.

Method: Possible causes for poor phosphate control were discussed with the Renal Consultant and Sister in monthly MDT meetings and through observation of current practice in the form of a Gemba walk. The Renal Dietitian conducted a telephone survey with 16 patients from the cohort to identify reasons for poor adherence to low phosphate diet and phosphate binders. A Pareto chart was used to identify factors responsible for 80% of the problem. Improvement of patient knowledge was identified as the main change required. Using the Model for Improvement, 3 plan-do-study-act (PDSA) cycles were implemented: PDSA #1 – Monthly biochemistry results were printed by nursing staff and placed in patient notes to improve patients' awareness of results; PDSA #2 – Educational posters and booklets were developed by the Renal Dietitian to improve patient knowledge of high phosphate foods, phosphate binders, avoiding phosphate additives and consequences of hyperphosphataemia. These were displayed in the corridor outside the dialysis unit and nursing staff were responsible for passing booklets between patients during dialysis; PDSA #3 – Intensive dietetic review of patients with phosphate levels >1.7 mmol/l, advising on low phosphate diet and adjustment of phosphate binder regimen. The interventions were evaluated by comparing phosphate levels for individuals before and after intensive dietetic reviews, and the percentage of patients in the cohort who achieved phosphate levels within target range. The percentage of patients with monthly blood results in folder was assessed from May- August 2018. Patient knowledge was assessed using a 10 point quiz developed by the Renal Dietitian; patients were selected at random to complete the quiz before and 1 month after educational resources were implemented.

Results: Percentage of patients with monthly blood results printed improved from 33% in May to 88% in June, however decreased to 17% in July and increased to 46% in August. Phosphate knowledge improved from average 4.4 to 5.9 out of 10 after implementation of educational resources. 5 out 7 patients who underwent intensive dietetic reviews achieved target phosphate levels post intervention. There was no difference in the percentage of patients achieving target range (62% pre and 59% post intervention). However the percentage of patients achieving target phosphate levels was better when compared to average data from the Renal Registry for the Trust, England and UK.

Discussion: Interventions successfully maintained the percentage of patients with phosphate levels within target range above averages for the Trust, England and UK. Intensive monthly dietetic reviews were successful in outlier patients. Further long term interventions are required to improve patient knowledge and self-management.