

IMPACT OF A NOVEL DIETITIAN-LED PHOSPHATE CONTROL INITIATIVE IN A HAEMODIALYSIS SATELLITE UNIT

Desai, M¹, Flint, J¹, Oates, T², Dupont, P², Jayasena, D², Onwubalili, J², Cunningham, J³

¹Dept of Nutrition & Dietetics, Royal Free Hospital, London, ²North Middlesex University Hospital, ³The Royal Free & University College Medical School

BACKGROUND: Haemodialysis patients with chronically elevated serum phosphate (PO₄) levels are at increased risk of vascular calcification, an important non-traditional risk factor for cardiovascular disease. In many patients, non-adherence to dietary restrictions and PO₄ binder therapy contributes significantly to poor phosphate control. Traditionally the dietitian's role has been confined to providing dietary advice since dietitians are not recognised as supplementary prescribers. Our unit has piloted a trial of dietitian-led prescribing under a patient group direction, guided by a pre-defined unit protocol.

AIM: To assess the efficacy and safety of a dietitian-led phosphate control initiative in a satellite haemodialysis unit.

METHODS: This was a 6-month prospective non-randomised observational study. 112 haemodialysis patients were studied. Group A (n=56) received usual care with their binder prescription adjusted by their physician. Group B (n=56) had their phosphate-binders adjusted according to a pre-defined protocol as part of a dietitian-led monthly ward round. All patients gave written consent for participation in this pilot study. Data was collected on serum Ca⁺², PO₄ and PTH levels. Adherence to treatment was also assessed and binder use recorded. Any serious adverse events attributable to binder medications were also documented.

RESULTS: In the dietitian-led arm, mean serum phosphate at the beginning of the study was 1.64mmol/L falling to 1.44mmol/L at 6 months. Mean serum phosphate in the control group at the start of the study was 1.73mmol/l falling to a mean of 1.48mmol/l (A vs B, p=NS at 6 mo; Student t test). Mean Ca⁺² x PO₄ levels were 3.98 in the intervention group falling to 3.39 at 6 months and 3.92 falling to 3.54 in the control. The proportions in each group achieving Renal Association / KDOQI targets for calcium, phosphate, Ca⁺² x PO₄ were similar (A vs B, p=NS; Student t test). No serious adverse events were encountered.

CONCLUSION: Our results suggest that dietitian-led management of serum phosphate using protocol-based prescribing is a safe and effective approach with outcomes comparable to conventional physician-led prescribing. Further work should be undertaken to look at the financial implications of this approach as it may well have a number of cost benefits.