

## A REVIEW OF DIABETES MANAGEMENT IN HAEMODIALYSIS AND PERITONEAL DIALYSIS PATIENTS

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**INTRODUCTION** The management of diabetes in patients with end stage renal disease has usually been undertaken by hospital/centre based diabetes clinics and/or Gp clinics. As part of the ongoing commitment to audit, a review of diabetes management, and nurse knowledge was undertaken to identify areas in need of review.

**AIM** The aim of this project was to document patient knowledge of diabetes management and treatment; document dialysis nurse knowledge of diabetes management of the haemodialysis (HD) and peritoneal dialysis (PD) population; ascertain the use and rationale for the use of high glucose dialysis fluid (11mmol/l) in HD patients, monitor blood glucose levels in type 1 and type 2 diabetics on haemodialysis and monitor blood glucose levels in a group of reported unstable diabetic patients using a 72 hour blood glucose monitor (Medtronic), present the results to the renal unit audit group for discussion with a view to making recommendations for future management.

**DESIGN** A working group was set up consisting of 4 dialysis nurses and the Renal Dietitian to discuss a method for data collection from each of the 3 HD and PD centre. A patient questionnaire was devised to establish baseline knowledge of diabetes management, blood glucose monitoring, and attendance at diabetes clinics in HD and PD patients. A nurse questionnaire was devised and circulated to establish diabetes education, blood glucose monitoring, and the rationale used for the use of high glucose dialysis fluid in HD patients. Blood glucose levels were monitored every 30 minutes on type 1 and type 2 haemodialysis patients attending 3 haemodialysis units using standard glucose (5.5mmol/l) and high glucose (11mmol/l) dialysis fluid. A 72 hour blood glucose monitor was used on a small number of PD and HD patients to assess variations in blood glucose levels. Data collection was co – ordinated by the renal dietitian.

**RESULTS** In summary the information gathered from this project identified a number of areas that require attention. 49 dialysis patients returned their questionnaire (88%) which indicated that 77% HD patients attend a diabetic clinic, as opposed to 44% PD patients who assumed that their diabetes care would be managed by the PD team. 76% of patients regularly tested blood glucose levels, but the level of blood glucose considered acceptable was variable, 88% of patients were happy with their control.

From the nurse questionnaire (32 sent out – 90% response), 69% had not received a diabetes update within the past 3 years. The use of high glucose dialysis fluid on HD was historical, often upon patient request or when blood glucose levels were perceived high or low. Frequency of blood glucose monitoring on haemodialysis in type 1 and type 2 diabetics varied, in addition to the information given on modification of diet and insulin regime on haemodialysis days. 30 minute blood glucose monitoring revealed few hypoglycemic episodes in either the high or standard glucose dialysis fluid. The use of a 72 blood glucose monitor was used to modify insulin regimes in patients with varying blood glucose levels.

**CONCLUSION** Results of this study were presented to the department and a number of recommendations made, these included writing a protocol for monitoring of blood levels of haemodialysis patients, ongoing nurse education, evidence based protocol for the use of high glucose dialysis fluid in type 1 diabetics on haemodialysis.

**DISCUSSION** It is hoped that with increased education and evidence based guidelines and working in partnership, a more consistent delivery of information will result.