

Bariatric surgery in patients with kidney disease; a service evaluation capturing 5 years of practice in a tertiary specialist hospital

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Background

Obesity is a known risk factor for chronic kidney disease (CKD) (1) and has a prevalence of 20% in the adult CKD population (2). Bariatric surgery can be effective in inducing significant weight loss in the general population (3) and it can specifically bridge renal patients to a life-changing kidney transplant. However, it has higher risk of complications in people with lower renal function (4). Since there are no renal specific dietary guidelines available, the aim of this service evaluation was to determine the progress of all renal patients undergoing bariatric surgery in our tertiary specialist hospital in the past 5 years and the range and scope of renal dietetic intervention post-surgery.

Methods

Data on weight, changes in dialysis modality, dietetic contacts from all renal patients [chronic kidney disease (CKD) stages 3-5, receiving haemodialysis (HD) or peritoneal dialysis (PD)] who underwent bariatric surgery from September 2014-September 2019 were collected and analysed. The service evaluation was registered with the Therapies Quality and Safety team.

Results

In total, 16 renal patients (8 men and 8 women, average age 53 years) underwent bariatric surgery in the last 5 years, with 50% having a sleeve gastrectomy and 50% gastric bypass. The average weight loss 1 year after surgery was 35%. In 90% of patients, serum phosphate levels reduced or stayed within the normal range 10 days post bariatric surgery and in all patients at 6 months. In 86% and 87% of patients respectively, serum potassium levels reduced or stayed within the normal range 10 days post bariatric surgery and at 6 months. Patients receiving renal replacement therapy received more input from renal dietitians than bariatric dietitians, whereas the opposite happened to CKD patients post-surgery. Over this timeframe, 25% of patients who were on HD underwent transplantation, 12.5% progressed from CKD to needing dialysis, 19% remained on HD/PD and in 6.25% of patients, renal function improved.

Conclusion

Bariatric surgery enabled a significant number of patients to qualify for transplantation. Serum potassium and phosphate levels decreased in the majority of patients post-surgery. The CKD population was mainly seen by bariatric dietitians while for dialysis patients, dietetic care was mainly provided by renal dietitians. This service evaluation was limited by its observational, retrospective nature.