

Case study demonstrating a successful individualised weight loss program for a haemodialysis patient to enable transplant listing.

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Background

For haemodialysis patients the age adjusted mortality is high and remains comparable to malignancy. Dialysis patients report lower physical activity levels, poorer quality of life, and consequently higher rates of depression. In the UK diabetes remains the most common cause of ESRD which is strongly linked with obesity. Therefore many patients on dialysis are overweight or obese. In our haemodialysis unit 61% of patients had a BMI >25 and 31.6% a BMI >30.

Previous literature has reported the 'obesity paradox' where obese patients on haemodialysis demonstrated a survival advantage compared to their malnourished counterparts. However dialysis patients then often face a barrier when obesity prevents access to kidney transplantation.

To date there is very little published information or literature regarding 'dieting' or non-surgical weight loss studies in haemodialysis patients.

Method

We identified a 57 year old lady on haemodialysis who was struggling to lose weight to be eligible for transplant listing. She had been trying to lose weight for 3 years and had been on haemodialysis since February 2017. She had tried a variety of diets without success. She was keen to look for non-surgical options for weight loss. Our renal dieticians organised food diaries and calculated that she would need to lose 10.5kg to enable listing for transplant. Our current local guidelines require a BMI <35 for patients to be activated for deceased donor listing.

We discussed her lifestyle and eating habits and devised a meal replacement program individualised for her. She replaced her 3 usual meals with fortisip compact protein drinks. With her calculated daily nutritional intake information below, our estimated weight loss was approx. 1 kg per week.

Daily intake:

- Calories 900
- Protein 54g
- Carbohydrate 91.5g
- Potassium 10.2mmol

Results

She made progressive weight loss over the following 3 months, losing over 10kg and reaching her target BMI of 35 by 11 weeks.

She completed her transplant workup and was listed on the deceased donor list 4 weeks later and was called for kidney transplant 5 weeks following that. To date her weight remains stable with no significant weight gain.

As fortisip is not a complete nutritional supplement she was also offered 'pregnacare' vitamins (the only on the market multivitamin that doesn't contain vitamin A). At baseline, 8 weeks and 12 weeks we measured her micronutrients and vitamins to ensure there were no deficiencies. She required no additional replacement.

The most difficult element was the frequent need for adjustment of target weight in line with her rapid weight loss and on one occasion this was set too low which resulted in a hypotensive episode.

Discussion

Supporting haemodialysis patients with weight loss through individualised meal replacement programs can be both safe and successful. Close monitoring however must be paid to their target weight, blood pressure

along with micronutrients and vitamins. This does require more frequent reviews and more resources over a short period of time however the patient benefits and long term cost savings to the NHS is significant.