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FACTORS AFFECTING INTERDIALYTIC WEIGHT GAIN IN HAEMODIALYSIS PATIENTS

Oral Medicine

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ABSTRACT

There are various factors influencing interdialytic weight gain of hemodialysis patient. It is a cross-sectional study. After obtaining permission from institutional ethical committee the study population was invited to take part in our study. Inclusion criteria were all patient aged above 18 on hemodialysis. Exclusion criteria were all patient under 18 years and patients on hemodialysis for less than 3 months. 78% of the study participant was well nourished according to SDA in our study. Diabetic study participant had higher IDWG than non diabetic population.

KEYWORDS

INTRODUCTION

There are various factors influencing interdialytic weight gain of hemodialysis patient.Dietary advice involves the choice of foods with low levels of sodium, potassium and phosphate, maintenance of adequate protein intake and fluid restriction. While the European guidelines recommend that the weight difference between two dialysis sessions, expressed as percentage (%IDWG), should not be greater than 4- 4.5%,the Kidney Disease Outcomes Quality Initiative (K/DOQI) set 5% as the limit. Studies have pointed to a relationship between high IDWG and complications such as hypertension, congestive heart failure and even death. The relationship between the IDWG and several nutritional status parameters has been studied. According to Testa & Beaud, food intake is an important determinant of IDWG, an increased IDWG possibly reflecting the nutritional status of HD patients.

METHOD

It is a cross-sectional study. After obtaining permission from institutional ethical committee the study population was invited to take part in our study. A separate register is used to note down the observed findings. We enrolled patients who were on a chronic HD program in one unit of Saveetha Medical College and Hospital,Thandalam, Chennai . Total of 150 patients were enrolled for the study. Inclusion criteria were all patient aged above 18 on hemodialysis. Exclusion criteria were all patient under 18 years and patients on hemodialysis for less than 3 months. Similar Procedure followed by fabiana baggio nerbass et al was followed in this study too. MS excel was used for the statistical analyses. Table 1 indiactes the outcomes of this study.The %IDWG was calculated in relation to the actual weight gain between two HD sessions, according to the following formula:

(body weight pre-presentHD - body weight post-previousHD) x 100 / body weight post- previousHD)

A %GPID < 5% was considered adequate, and a %GPID > 5% was considered increased. Pre-HD blood pressure (BP) was measured after the patient had been sitting for at least five minutes, and post-HD BP was measured after all the blood had been returned to the patient.

Both for %IDWG and BP analyses, the means obtained for the 4-week HD period were calculated. The data were obtained from the patients' records. The BMI and 7-point SGA scale were used as indicators of the nutritional status. The BMI is calculated by dividing weight in kilograms by the square of height in meters. SGA classified the patients as well-nourished, with mild/moderate malnutrition or with severe malnutrition. The assessments were made after each HD session by nutritionist.

Table 1 outcomes of this study

Pre dialysis BP	130±50/98±24
Post dialysis BP	110±26/80±12
BMI	24.2±5.2

DISCUSSION:

Out of 150 study population 88 were male and 62 were female. The male: female ratio in this study is 1.419:1. There is higher number of male participants in this study similar to study done by fabiana baggio nerbass et al. the study population was divided into 3 age groups 18-50years, 51-60 years and above 60 years. Most of the study participant belongs to age group above 60 followed be age group 51-60 years and the younger age group. %IDWG was significantly higher in females than male similar to study done by fabiana baggio nerbass et al.

78% of the study participant were well nourished according to SDA whereas study done by fabiana baggio nerbass et al where nearly 82% of the study participants were well nourished according to SDA. %IDWG was higher in patients with some degree of malnutrition, compared to those well-nourished similar to study done by fabiana baggio nerbass et al.

The patients were also grouped according to their %IDWG, values above 5% being considered high. Of all the individuals, 21% had increased %IDWG whereas study done by fabiana baggio nerbass et al showed 24% had increased %IDWG.

Around 36% of the study population was diabetic. Diabetic study participant had higher IDWG than non diabetic population. This is not similar with the study done by fabiana baggio nerbass et al where there is decrease in IDWG in diabetic population.

CONCLUSION:

From this study it clearly indicates diabetic patients and malnourished patient have a direct influence in percentage of interdialytic weight gain in our study. Limitations of this study was a small study population and short study duration

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