

# RELATIONSHIP BETWEEN PERITONEAL DIALYSIS AND BODY MASS INDEX

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## INTRODUCTION

Obesity is defined as having body mass index (BMI) over 30 kg/m<sup>2</sup>. Water in blood plasma of hypotonic peritoneal capillaries, passes into hypertonic peritoneal dialysis (PD) solution. So that, ultrafiltration in PD occurs.

Glucose is used as an osmotic agent in PD solutions. In PD, 30-80% of glucose is absorbed depending on peritoneal permeability and the time of change. This amount is equivalent to about 500-800 kcal. This calorie constitutes 80% of the calories required to be taken daily from carbohydrates. PD is thought to be partly responsible for 5-10% weight gain in the first year.

## AIM

In this study; we aimed to investigate BMI increase in patients followed up on our peritoneal dialysis unit.

## METHOD

35 patients who had a mean PD duration of 33.54 months and who received continuous peritoneal dialysis treatment for at least 6 months were included in the study. The mean age of the patients was 40.63±15.8. Patient files were reviewed retrospectively. Demographic and biochemical characteristics were recorded. BMI calculated based on the patients dry weights at the time they started peritoneal dialysis and the patients current dry weights.

## RESULTS

8 of the patients (51%) were female and 17 (49%) were male. The initial and final BMI groupings of the patients are indicated in Tables 1 and 2. It was found that the number of patients with initial BMI <20 kg/m<sup>2</sup> was decreased and the number of patients with BMI> 30 kg/m<sup>2</sup> was increased. Especially patients with diabetes mellitus (DM) had BMI> 30 kg/m<sup>2</sup>.

## DISCUSSION and CONCLUSION

Weight gain is very common following PD therapy. Increase in nutrition following inactivity and the increase in calorie intake due to the absorption of dialysis solutions also contribute to weight gain. These patients may have undesirable metabolic consequences such as dyslipidemia and hyperglycaemia. Unfortunately, dietary restrictions can lead to malnutrition in these patients. Especially daily calorie calculation of diabetic peritoneal dialysis patients should be done with dietitian cooperation.

Table-1

Initial BMI	
BMI (kg/m <sup>2</sup> )	Number of patients (n %)
<20	10 (28.5 %)
20-25	11 (31.4 %)
25-30	10 (28.5 %)
>30	4 (11.6 %)

Table-2

Final BMI	
BMI (kg/m <sup>2</sup> )	Number of patients (n %)
<20	6 (17.2 %)
20-25	14 (40 %)
25-30	8 (22.8 %)
>30	7 (20 %)

**Key words:** obesity, peritoneal dialysis, body mass index

