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Nutritional Evaluation of Stabile COPD Patients Before Pulmonary Rehabilitation

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Objectives: COPD is a systemic disorder which can cause weight loss, decrease in muscle mass, malnutrition and cachexia because of multiple causes. Malnutrition and cachexia have negative effect on prognosis. They may cause worsening in symptoms, restriction in daily activities, recurrent hospitalizations and increase in treatment costs. This study aims to evaluate characteristics of stabile COPD patients who were consulted in nutrition outpatient clinic before pulmonary rehabilitation (PR).

Methods: Total of 187 patients who were admitted to the nutrition outpatient clinic between January 2017 and October 2018 were included in the study. Nutrition risk evaluation was evaluated by using NRS-2002 scale. Patients whose NRS-2002 score was equal or greater than 3 points were accepted as in malnutrition risk group. Bioelectrical impedance analysis (BIA) was used in order to determine body composition. Fifty patients whose BIA could not be performed were excluded from study. Body mass index (BMI) lesser than 18.5 were accepted as malnutrition. Fat free muscle index (FFMI) was calculated as division of fat free mass (FFM) by height in metres squared. Cachexia was defined as FFMI lesser than 15 kg/m^2 for females and 17 kg/m^2 for males. Age, gender, body compositions, NRS-2002 scores, CRP and albumin values were compared between cachetic and noncachetic groups. SPSS for Windows version 21.0 was used for statistical analysis. P<0.05 was accepted as statistically significant.

Results: There were 19 (13.8%) female and 118 (86.1%) male patients. The mean age was 64,1±9,0 years. 68.4% of the patients had malnutrition risk and 32.8% had malnutrition. According to FFMI evaluation, 18% of patients with normal BMI and 40% of all patients were cachectic. Mean NRS-2002 score of cachectic group was higher than noncachectic group. There was no significant difference between two groups in terms of mean age, gender, CRP and albumin values.

Conclusion: According to our results, 1/3 of pre-rehabilitaion COPD patients were malnutrated and nearly half of them were cachectic. Investigation of weight loss and nutritional status would preclude malnutrition and increase gains of the rehabilitation programmes.

Keywords: COPD, pulmonary rehabilatiton, nutrition