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Original Article

Assessment of Nutritional Status in Chronic Obstructive Pulmonary Disease Patients

L Yazdanpanah [1], F Shidfar [1], JA Moosavi [2], H Heidarnazhad [3], H Haghani [4]

[1]*Dept. of Nutrition, School of Public Health, Iran Univ. of Medical Sciences, Tehran, Iran*
[2]*Dept. of Pulmonology, Rasul-e-Akram Hospital, Iran University of Medical Sciences, Tehran, Iran*
[3]*Chronic Respiratory Disease Research Center, NRITLD, Masih Daneshvari Hospital, Shahid Beheshti University (MC)*
[4]*Dept.of Biostatistics, Iran University of Medical Sciences, Tehran, Iran*

Corresponding Author:

L Yazdanpanah

Mobile: +98 912 3681025
E-mail: Yazdanpanah_l@yahoo.com

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Abstract:

Background: Chronic obstructive pulmonary disease (COPD) is considered a major public health problem in the world. Weight loss, muscle and fat mass depletion are common nutritional problems in COPD patients and are determinant factors in pulmonary function, health status, disability and mortality. In the present study, we assessed nutritional status in COPD patients.

Methods: This cross-sectional study was performed in the Rasul-e-Akram Hospital, Tehran, Iran on 63 COPD patients with mean age (SD) of 67.6 (9.4) years. All subjects were diagnosed by a pulmonary specialist and based on a spirometry test. They were divided into three groups (2, 3, 4 stages of disease). Anthropometric and biochemical indices, body composition analyses by bioelectric impedance, spirometry test and determination of disease severity were performed for all subjects. All analyses were performed using the SPSS 14. All data presented as means (± sd).

Results: Reduction of body mass index (BMI), Mid-Arm Muscle Circumference (MAMC) and Fat-Free Mass (FFM) were observed alongside an increase in disease severity but it was not significant. Significant reduction of Fat Mass (FM) (*P*= 0.007), Fat Mass Index (FMI) (*P*= 0.03) and biochemical indices like Albumin (*P*= 0.000) and Total Protein (*P*= 0.04) were associated with an increase in disease stages.

Conclusion: It is suggested that in addition to BMI, other nutritional status indices like MAMC, FFM and FM should be used for early diagnosis of malnutrition before weight loss occurs.

Keywords:

Chronic obstructive pulmonary disease ، *Mid-arm muscle circumference* ، *Fat-free mass* ، *Fat mass index* ، *Bioelectric impedance*

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