

PULMONARY CACHEXIA - A REVIEW OF MALNUTRITION IN PATIENTS WITH ADVANCED LUNG DISEASES AND STRATEGIES FOR DIET THERAPY

Vladimir Andreevski^{1*}, Petar Damceski¹, Stefan Pejkovski¹

¹University Clinic of Gastroenterohepatology, Medical Faculty, Ss. Cyril and Methodius University, Boulevard Mother Teresa 17, 1000 Skopje, Macedonia

***e-mail: banebumbar_med@hotmail.com**

Abstract

Patients with advanced lung diseases often suffer from changes in body structure that manifest with progressive weight loss. Malnutrition associated with these morbidities is known as pulmonary cachexia syndrome that can occur in any type of chronic lung disease. This review will look at contributing factors for the appearance of pulmonary cachexia and strategies for diet therapy.

Since it was first mentioned and introduced as a new term in 2002, initially in patients with chronic obstructive pulmonary disease, pulmonary cachexia syndrome as distinct type of malnutrition has been subject of evaluation by dozen of observational studies, randomized trials and only few meta-analysis, listed in databases like PubMed/Medline, ProQuest, Scopus and others. Malnutrition is associated with accelerated decline in functional status and is independent predictor of mortality in advanced lung diseases. Patients have progressive reduction in lean body mass due to several contributing factors, like changes in metabolism and caloric intake, effects of lung dysfunction, aging process, loss of muscle mass, decreased physical activity, tissue hypoxia, chronic inflammation, and use of different drugs. The interaction of all aforementioned phenomena results in development of pulmonary cachexia. Focused nutritional assessment can aid in timely detection of first signs of malnutrition. The widely accepted goals of diet therapy are: adequate caloric intake to meet basal energy expenditure; small, frequent meals with nutrient-dense foods; meals requiring little preparation; rest before meals and daily multivitamins. However, nutrition alone is not enough to prevent muscle loss and improve respiratory function, so it's important to apply the following measures simultaneously: optimization of lung function, regular exercise to enhance the effect of diet and stimulate appetite, oxygen therapy, correction of any anaemia and cardiac dysfunction, inflammation control, use of anabolic preparations, and additional measures such as application of artificial dietary supplements using nasogastric tube or percutaneous gastrostomy.

The association of malnutrition with morbidity and mortality in pulmonary cachexia is a logical basis for the application of nutritional support. Monitoring and treatment of each of contributing variables should be performed regularly and consistently. Once identified, malnutrition can be mitigated via proper diet therapy which aims to improve prognosis in advanced lung diseases.

Key words: *Nutrition, Pulmonary Cachexia, Advanced lung disease, Diet therapy.*