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ABSTRACT BOOK

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SARCOPENIA IN PATIENTS WITH LIVER CIRRHOSIS: PREVALENCE AND RELATION TO SEVERITY OF DISEASE

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Introduction. Liver cirrhosis (LC) is a global health problem, and the contribution of LC to the morbidity and mortality of the population has become increasingly. Malnutrition and its most relevant clinical manifestation - sarcopenia are common, but often neglected complications of LC. Recent studies have shown that alterations in nutritional status and muscle depletion are potentially associated with a higher incidence of LC complications, a negative impact on quality of life and decreased patient's survival.

Aim. To determine the prevalence of sarcopenia in hospitalized patients with LC and to estimate its relation to severity of LC and its essential complications.

Materials and methods. 80 patients with LC (55 men and 25 women) were examined. 18 patients had LC Child-Turcotte-Pugh (CTP) Class A, 29 had LC Class B and 33 patients had LC Class C, mean age was 54.7 ± 2.85 , 57.3 ± 2.49 and $61,3 \pm 2.18$ years, respectively. Viral etiology of LC was confirmed in 28 patients, alcoholic - in 44 patients. The psoas muscle index (PMI) at the L3 vertebral level computed tomography (CT) scan and relative handgrip strength (absolute handgrip strength, normalized to body weight) were assessed to evaluate sarcopenia.

Results. LC decompensation was associated with the significant decrease of PMI and relative handgrip strength. Sarcopenia (PMI males $<5.1 \text{ cm}^2 / \text{m}^2$; females $<4.3 \text{ cm}^2 / \text{m}^2$) was detected in 17%, 31% and 64% of patients with Class A, B, and C, respectively. The prevalence of sarcopenia was higher in men (51.1 vs 31.4% in women) and in patients with alcoholic LC (50.0 vs. 25.9% in patients with viral LC). Sarcopenic patients had significantly lower serum albumin level, prolonged prothrombin time, higher radiographic liver density, and bigger portal vein diameter on CT than patients with well-preserved muscle mass. The incidence of hepatic encephalopathy, refractory ascites, pleural effusion, esophageal varices grade 2 and 3 in patients with sarcopenia was high, it amounted to 63.6, 35.7, 42.2 and 56.7%, respectively vs. 31.9, 4.2, 2.1 and 27.9 % in patients without sarcopenia. PMI was correlated with CTP score, MELD score and serum albumin level ($r=-0.44$, $-0,46$, $0,39$, respectively, $p<0,05$).

Conclusion. Decline in muscle mass and muscle strength is common in patients with LC. Sarcopenia is more prevalent in patients with LC CTP Class C, especially alcoholic etiology, and it's associated with higher MELD score and essential LC complications.

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