

## عنوان مقاله:

Skeletal Muscle Mitochondrial Impairment in Cirrhosis-Induced Sarcopenia

## محل انتشار:

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تعداد صفحات اصل مقاله: 16

## نویسندگان:

Omid Farshad - *Pharmaceutical Sciences Research Center, Shiraz university of Medical Sciences, Shiraz, Iran*

Mohammad Mehdi Ommati - *College of Life Sciences, Shanxi Agricultural University, Taigu, Shanxi ۰۳۰۸۰۱, Peoples&rsquo; Republic of China*

Jale Yüzügülen - *Eastern Mediterranean University, Faculty of Pharmacy, Famagusta, North Cyprus, Turkey*

Sahand Alizadeh - *Eastern Mediterranean University, Faculty of Pharmacy, Famagusta, North Cyprus, Turkey*

Khadijeh Mousavi - *Pharmaceutical Sciences Research Center, Shiraz university of Medical Sciences, Shiraz, Iran*

Negar Azarpira - *Transplant Research Center, Shiraz University of Medical Sciences*

Anahita Marhonian - *Pharmaceutical Sciences Research Center, Shiraz University of Medical Sciences, Shiraz, Iran*

Akram Jamshidzadeh - *Pharmaceutical Sciences Research Center, Shiraz University of Medical Sciences, Shiraz, Iran*

Reza Heidari - *Shiraz University of Medical Sciences, Pharmaceutical Sciences Research Center*

## خلاصه مقاله:

Cirrhosis-associated muscle mass loss or sarcopenia is a common complication (17-30% prevalence) in cirrhotic patients. However, the pathogenesis of this complication is poorly understood. Therefore, finding the mechanisms of sarcopenia could lead to the development of therapeutic strategies against this complication. In the current study, rats underwent bile duct ligation (BDL) surgery, and their skeletal muscle (gastrocnemius; GS) was isolated and assessed 28 and 56 days after BDL operation. Significant increase in biomarkers of oxidative stress, including reactive oxygen species (ROS) formation, lipid peroxidation, and increased oxidized glutathione (GSSG) levels were detected in the muscle of cirrhotic animals. Skeletal muscle tissue antioxidant capacity and reduced glutathione (GSH) were also significantly decreased in BDL rats. Moreover, deterioration of several mitochondrial indices, including mitochondrial depolarization, increased mitochondrial permeabilization, depleted ATP reservoirs, and decreased mitochondrial dehydrogenases activity, were evident in the GS isolated from cirrhotic rats. Based on these data, oxidative stress and mitochondrial impairment seem to play as primary mechanisms of cirrhosis-induced sarcopenia.

## کلمات کلیدی:

Cell death, Cirrhosis, Energy crisis, Mitochondria, Muscle waste, Weakness

