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The effect of HCV virus elimination after therapy with direct-acting antiviral drugs on physical performance, muscle strength and selected laboratory parameters of liver transplant patients

Streszczenie w języku angielskim

“The effect of HCV virus elimination after therapy with direct-acting antiviral drugs on physical performance, muscle strength and selected laboratory parameters of liver transplant patients.”

Hepatitis C virus (HCV) recurs after liver transplantation in all patients infected before transplantation and leads to the development of inflammation, fibrosis and failure of the transplanted organ. Chronic hepatitis is associated not only with numerous somatic symptoms, such as metabolic disorders, muscular atrophy and ascites, but also with psychological symptoms, caused by hepatic encephalopathy and by the effects of the virus itself. The quality of life of liver transplantation (LTX) patients infected with HCV is significantly reduced. For many years, treatment of HCV infection after transplantation consisted of pegylated interferons with ribavirin, but the efficacy of such therapy, defined as the percentage of patients with sustained viral response (SVR), did not exceed 30 per cent. Interferon based therapy was associated with numerous side effects, including graft rejection. In the middle of the second decade of the 21st century, direct-acting agents (DAAs), used in combination and without the addition of interferons, were introduced for treatment. DAAs show very high HCV elimination efficacy, reaching up to 100 % in some patient groups. Moreover, the adverse effects of these drugs are rare and of low severity.

The aim of this study was to investigate whether HCV elimination following DAAs treatment affects physical performance, muscle strength and selected laboratory parameters in liver transplant patients. The study involved 38 liver transplant patients with recurrent HCV infection treated in the Outpatient Clinic of the Department of Immunology, Transplantology and Internal Medicine of the Medical University of Warsaw.

The study was longitudinal, i.e. patient outcomes before treatment were comparable to those obtained 12 weeks after the intervention i.e. when the patient had achieved a sustained virological response and 36 months after the end of therapy.

The 6-minute walk test (6MWT) was used to assess the patients' fitness. Hand muscle strength was measured using a Jamar 5030J1 Hand Dynamometer. Values of selected laboratory parameters such as hemoglobin (HGB), iron, creatinine, alanine aminotransferase (ALAT) and aspartate aminotransferase (ASPAT) and total bilirubin and urea were also analyzed.