

Medical and Dietary Potentials of Mare's Milk in Liver Diseases

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Abstract : Mare's milk (saumal) contains in total about 40 biological components necessary for the human body. The most significant among them are amino acids, fats, carbohydrates, enzymes (lysozyme, amylase), more minerals and vitamins which are well balanced with each other. In Kazakhstan, Company "Eurasia Invest Ltd." produces a freeze-dried saumal in form of powder by the use of modern German innovative technology by means of evaporating at low temperature (-35°C) with an appropriate pasteurization. Research of freeze-dried biomilk for the qualitative content showed that main ingredients of freshly drawn milk are being preserved. We are currently studying medical and dietary properties of freeze-dried mare's milk for diseases of the digestive system, including for nonalcoholic steatohepatitis (NASH) and liver cirrhosis (LC) viral etiology. The studied group consisted of 14 patients with NASH, and 7 patients with LC viral etiology of Class A severity degree as per Child-Pugh. Patients took freeze-dried saumal, preliminary dissolved in boiled warm water (24 g. powder per 200 ml water) 3-4 times a day for a month in conjunction with basic therapy. The results were compared to a control group (11 patients with NASH and LC) who received only basic therapy without mare's milk. Results of preliminary research showed an improvement of subjective and objective conditions of all patients, but more significant improvement of clinical symptoms and syndromes were observed in the treatment group compared to the control one. Patients with NASH significantly over time compared to the beginning of therapy decreased asthenic and dyspeptic syndromes ($p < 0,01$). Hepatomegaly, identified on the basis of ultrasound prior to treatment was observed in $92,8 \pm 2,4\%$ of patients, and after combination therapy hepatomegaly the rate decreased by 14,3%, amounting to $78,5 \pm 2,8\%$. Patients with LC also noted the improvement of asthenic ($p < 0,01$) and dyspeptic ($p < 0,05$) syndromes and hemorrhagic syndrome (nosebleeds and bleeding gums when brushing your teeth, $p < 0,05$), and jaundice. Laboratory study also showed improvement in the research group, but more significant changes were observed in the experimental group. Group of patients with NASH showed a significant improvement of index in cytolysis in conjunction with a combination therapy ($p < 0,05$). In the control group, these indicators were also improved, but they were not statistically reliable ($p > 0,05$). Markers of liver failure were additionally studied during the study of laboratory parameters in patients with liver cirrhosis, in particular, bilirubin, albumin and prothrombin index (PTI). Combined therapy with the use of basic treatment and mare's milk showed a significant improvement in cytolysis and bilirubin ($p < 0,05$). In our opinion, a very important and interesting fact is that, in conjunction with basic therapy, the use of mare's milk revealed an improvement of liver function in the form of normalized PTI and albumin in patients with liver cirrhosis viral etiology. Results of this work have shown therapeutic efficiency of the use of mare's milk in complex treatment of patients with liver disease and require further in-depth study.

Keywords : liver cirrhosis, non-alcohol steatohepatitis, saumal, mare's milk

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