

# Functional State of the Liver in Rheumatoid Arthritis (Literature Review)

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**Abstract: Objective:** The article presents the state of the liver in patients with rheumatoid arthritis.

**Keywords:** Rheumatoid arthritis (RA), biologically active substances (BAS), liver.

**Introduction.** The essence of the pathological process in rheumatoid arthritis (RA) is generalized immunological (autoimmune) inflammation, leading to the development of synovitis, as well as a wide range of extra-articular organ manifestations [3], of which gastrointestinal pathology accounts for 11%, including hepatomegaly in 19.5% of them [2]. Views on the causes and nature of liver pathology in RA have changed over time, depending on the point of view of researchers on the pathogenesis of the disease, the expansion of the range of drugs, often hepatotoxic, used in rheumatology. In the 60s, the role of the primary focus of inflammation - synovial tissue as an inducer of autoallergic processes was discussed (T. Higashi, F. Hasegava, 1960); organ-specific autoantibodies (L. T. Pyai, 1967), increased permeability of the vascular wall, instability of hepatocytes leading to hyperfermentemia, dysproteinemia (P. Borset, E. Pecters, 1961); reducing the reserve of vitamins, impaired enzymatic function (M.E. Kurmaeva, 1969) and blood circulation in the liver (V.F. Sysoev, E.S. Mach, 1966) [cit. according to 4].

Most researchers, already at the early stage of RA, noted a violation of its detoxification, pigment, protein-forming and carbohydrate functions, others believed that the function of the organ suffers only with amyloid damage [7]. Structural changes on which the functioning of the liver directly depends were described by domestic pathomorphologists as granular, fatty degeneration, deposition of amyloid masses, and, less commonly, annular cirrhosis and necrosis of hepatocytes [6]. Similar changes were found in liver tissue in RA by other researchers [1,7]. Moreover, in the work of V.V. Vasilenkaitis [5], a correlation was demonstrated between structural and functional liver disorders and the activity of the rheumatoid process.

One of the factors that potentiates the inflammatory process may be inflammatory products that support this process. Metabolic inactivation and degradation of many biologically active substances (BAS), in particular prostaglandins, leukotrienes, histamine, and sympathomimetic amines, occurs in the liver [8]. The liver, due to its size and position, is the main biological barrier to endogenous and exogenous toxic compounds entering the bloodstream through the portal system, carries out detoxification processes in the body and ensures the stability of its chemical homeostasis.

It has been suggested that the body's immunological defense system is reciprocally connected with the biochemical one and both of them are part of a single self-regulating system for maintaining the body's immunochemical homeostasis [9]. Metabolic disorders, neutralization and elimination processes in the liver, destabilizing homeostasis, can ultimately have a significant impact on the course of the disease.

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