

METHODS OF INVESTIGATION OF SYNOVIAL FLUID FROM PATIENTS WITH REPLACEMENT ARTHROPLASTY COMPLICATIONS

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Introduction. At present, the number of patients with surgical pathology of limb joints is steadily increasing, and the frequency of this pathology varies from 30 to 55% among all orthopedic diseases. However, often infectious complications after surgery on joints with implants lead to severe orthopedic defects. Most often these postoperative complications have a microbial etiology.

Aim. The aim of the work was to study the methods for pathogens under replacement arthroplasty complications identification and for the latent intraarticular infection diagnosis quality improvement.

Results and discussion. Synovial fluid is a thick, elastic mass that fills the joint cavity. Investigation of synovial fluid is of great importance in the diagnosis of joint diseases, the degree of local inflammatory activity elimination, the nature of the inflammatory process identification, the dynamics of the pathological process in the joints monitoring, the effectiveness of intraarticular therapy evaluation. In the investigation of synovial fluid from patients with replacement arthroplasty complications microbiological methods play a leading role.

The technology of synovial fluid research consists of such procedures:

1. Synovial fluid collecting (puncture of the joint, sampling of biomaterial in sterile test tubes with observance of asepsis rules).
2. Synovial fluid transportation to the laboratory (immediate transfer to the clinical diagnostic and microbiological laboratory).
3. Synovial fluid testing:
 - 3.1. Biochemical studies (color, amount, transparency, viscosity, presence of sediment, density of mucinous clot detection).
 - 3.2. Microscopic studies (cells counting in Goryaev's chamber for the cytolysis detection, study of native and stained preparations, synoviocytogram calculation).
 - 3.3. Microbiological studies (microscopy of stained preparations, identification of microbial cultures).

Conclusion: The synovial fluid study remains one of the most important diagnostic methods for inflammatory joint diseases and replacement arthroplasty complications. The conducted researches will help to reveal etiological agents and improve their identification.