

E.B.Komarova<sup>1</sup>  
A.B.Kurinni<sup>2</sup>

<sup>1</sup> State institution  
“Lugansk State  
Medical University”

<sup>2</sup> Lugansk Regional  
Clinical Hospital

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## THE MORPHOLOGICAL STRUCTURE OF THE SYNOVIAL MEMBRANE IN RHEUMATOID ARTHRITIS

*The study was conducted as the part of research work “Optimization of methods for treatment and diagnosis of internal organs diseases, evaluation of their efficiency” (state registration 0111U006069).*

**ABSTRACT. Background.** Rheumatoid arthritis - an autoimmune disease which is characterized by inflammatory and proliferative processes in the synovium; a few studies have shown that there are significant differences in the structure of synovium at different stages of rheumatoid arthritis, but further investigation is needed to detail this data. **Objective.** To study the morphology of the synovial membrane, depending on the duration of rheumatoid arthritis. **Methods.** Patients were divided into 2 groups: the first included 10 patients with rheumatoid arthritis lasting up to 2 years ( $12,85 \pm 7,61$  months), 2nd group consisted of 11 patients with RA duration from 2 to 8 years ( $5,8 \pm 1,8$  years). Verification of the diagnosis was performed according to the ACR/EULAR, 2010 criteria. Patients underwent arthroscopic examination with biopsy and subsequent histological analysis. **Results.** In patients of the 1<sup>st</sup> group the signs of angiogenesis, focal lymphoid infiltration and edema of the synovial membrane were most frequently seen, that may indicate a predominance of immune inflammatory processes and neo-angiogenesis at early stages of pathogenesis. In patients of the 2<sup>nd</sup> group the signs of severe synoviocyte proliferation (more than 6 layers), hyperplasia of villous, diffuse lymphoid infiltration, and mucoid swelling were seen more often. It confirms the data about the prevalence of proliferation and connective tissue disorganization at later stages of the pathogenesis of rheumatoid arthritis. **Conclusion.** The data obtained let us develop a differentiated approach to the complex treatment of rheumatoid arthritis with varied duration of the disease.

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✉ elbelcom@ua.fm

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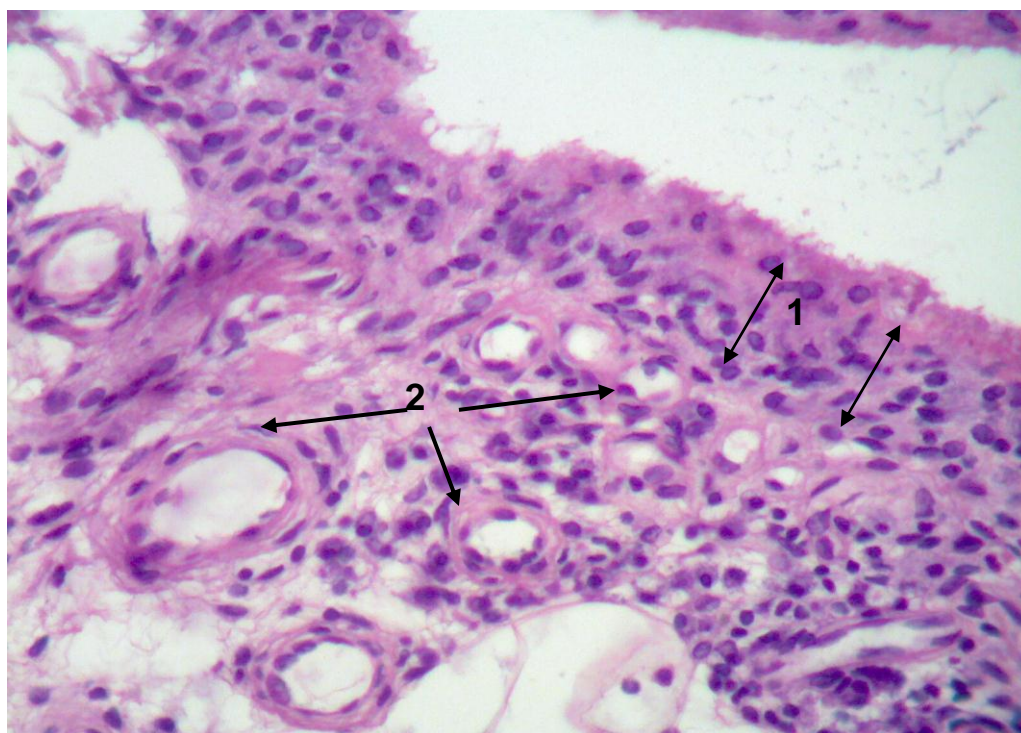


Fig. 1. Synovial membrane of 11-month duration rheumatoid arthritis. 1 – coating synoviocytes proliferation (3-4 rows), 2 – angiogenesis. Hematoxylin & Eosin staining.  $\times 100$ .

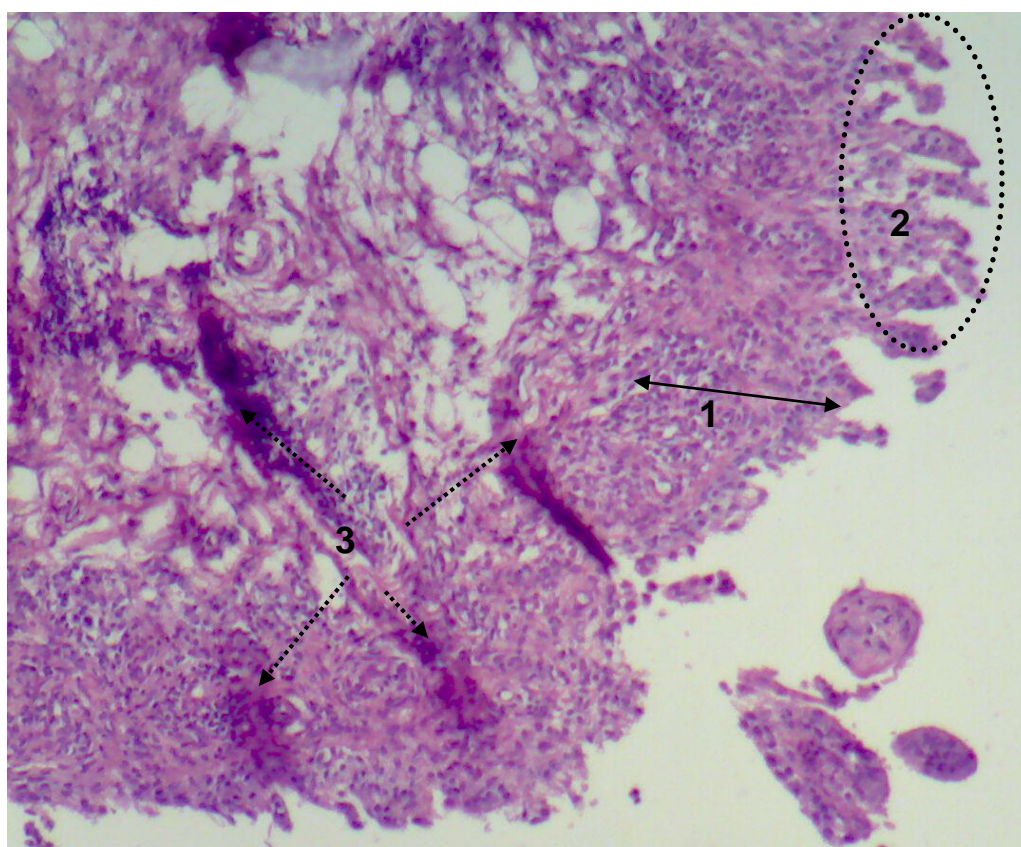


Fig. 2. Synovial membrane of 4-years duration rheumatoid arthritis. 1 – coating synoviocytes proliferation (more than 6 rows), 2 – hyperplastic villi, 3 - fibrinoid. Hematoxylin & Eosin staining.  $\times 40$ .

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