

Michailova · Usunoff

**Serosal Membranes (Pleura, Pericardium, Peritoneum):
Normal Structure, Development and Experimental Pathology**

This monograph offers a comprehensive review of the present knowledge of the structure of the serosal coverings of the pleural, pericardial, and peritoneal cavities in humans and laboratory animals. The authors provide data from their own research – with transmission and scanning electron microscopy – on the structure of the main components of the serosal membranes: mesothelial cells, underlying basal lamina, and submesothelial connective tissue layer. Two main types of mesothelial cells (flat and cubic) are distinguished and their distribution on the parietal serosal sheets and on the visceral coverings of various organs is described. The openings between mesothelial cells (stomata) and their relations with lymphatic lacunae are described thoroughly. Special reference is made to the serosal accumulations of lymphoid tissue (milky spots). The transcellular and intercellular transport to and from serosal cavities is studied by means of horseradish peroxidase tracing experiments. The prenatal and postnatal developmental studies are focused on human and rat pleura. The alterations of serosal membranes after experimental hemothorax, pneumonectomy, and peritonitis caused by *Pseudomonas aeruginosa* application suggest the existence of early, reversible, and late, definite periods.

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