ELECTRON MICROSCOPIC OBSERVATIONS OF THE MECHANICALLY ISOLATED SEMINIFEROUS TUBULES OF THE RAT

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The aim of this study was to visualize the morphological details of the outer layers of the seminiferous tubules of the rat.

Adult rat testes fixed by perfusion with 3% glutaraldehyde were used. Seminiferous tubules were tested out of the interstitial tissue and post fixation was done with 2% osmium tetroxide for 2 hours. Some of these tubules were hydrolized with 8N HCI for 30-40 minutes at 60° C. These non hydrolized and hydrolized tubules were observed under a scanning and a transmission electron microscope.

In the non hydrolized tubules the entire surface is covered with polygonal lymphatic endothelial cells. These cells form the inner lining of the lymphatic space that surround the seminiferous tubules. No fenestrations or grooves are seen in the endothelial surface. Hydrolysis of the tubules exposes the myoid cell layer by the removal of the connective tissue elements along with the endothelial layer. These cells are polygonal in shape and flat, arranged in one layer. In the cytoplasm of these cells there are abundant microfilaments and other components characteristic of smooth muscle cells.