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EARLY POSTNATAL GROWTH OF THE INITIAL LYMPHATICS IN THE VENTRAL STRIPE OF SPINOTRAPEZIUS MUSCLE OF THE RAT

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ABSTRACT

The aim of the study was the morphological description of the early postnatal growth of the initial lymphatics in the ventral stripe of the spinotrapezius muscle of the rat. Electron-microscopically it was found out that in the muscles of newborn rats no well developed lymphatics were apparent, but the presence of specifically polarized mesenchymal cells in the close vicinity of central blood vessels was evident. In animals aged one-day through two-weeks-old, those modified mesenchymal cells continuously joined with one another, to form simple intercellular contacts and incomplete lymphatic lumina. Morphologically, they were well demarcated relative to the surrounding muscular interstitium. In three-week-old rats all intramuscular lymphatics were well developed, including fine intraluminal valves, and their endothelial cells presented slight pinocytotic activity and a complete absence of a basal lamina. In growing lymphatic endothelial cells no mitoses or signs of sprouting, typical for the growth of blood capillaries, were found. In conclusion, a possible morphological mechanism enabling the expansion of the growing lymphatic endothelial cells could be the specific remodeling of cytoplasmic vacuoles accumulated in the peripheral cellular processes.