8757 P

Sensory Nerve Terminations Associated with Peripheral Blood Vessels.

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The end organs in the walls of the arteries and veins and perivascular tissue in the forelimb of the cat, which are connected with afferent nerve fibers, have been studied with the aid of a modified pyridine-silver technique in preparations in which the sympathetic nerve fibers had undergone degeneration following extirpation of the inferior cervical sympathetic ganglion. Eight cats were subjected to this operation under aseptic conditions and allowed to live 46 to 81 days in order to insure complete degeneration of the sympathetic fibers supplying the vessels in question.

The end organs observed in the perivascular tissue include delicate skein-like structures made up of the terminal branches of slender nerve fibers, groups of cells aggregated in fatty interspaces, and arborizations of coarser nerve fibers the terminal branches of which form brush-like structures which ultimately end freely or in relation to small rounded cells. The fibers connected with these end organs deviate from nerves in the adventitia.

The end organs in the adventitia are coarser than those in the perivascular tissue. Those observed in the proximal portions of the larger arteries are connected with myelinated fibers which divide into short stout processes and end as dark club-shaped knobs. Similar structures with finer and more diffuse terminations were also observed.

The endings in the adventitia of the distal muscular arteries are neither as thick nor as extensive as those observed in the larger arteries and the perivascular tissues, and are confined to the middle or deeper zones. They lie in relation to small refractive cells and are of 3 types: ramifying myelinated fibers with unmyelinated terminal branches; segmented structures adjacent to the muscular coat, and tortuous individual fibers which end in relation to single falciform cells.

No specialized nerve-endings were observed in the media. Unmyelinated afferent nerve fibers enter this layer in slender bundles after a spiral course parallel to the longitudinal axis of the vessel, and after a tortuous course end freely in the connective tissue between the smooth muscle cells.

Afferent nerve fibers to veins have been observed only in the adventitia, where they run a straight course without extensive plexus formation. Sensory end-organs connected with these fibers have been observed in the larger veins, but not in the distal smaller ones.

Some of the earlier investigators have described delicate nerve fibers, presumably afferent in character, which terminate in the intima. No nerve fibers could be observed in the intima in any of our preparations. No ganglion cells were observed along any peripheral vessels.

The afferent end organs described above are morphologically similar to certain of those described by Sunder-Plassman (1930)[1] in the carotid sinus and those described by Larsell (1921, 1922, 1935)[2] and Larsell and Dow (1933)[3] in the respiratory tract.

8758 C

Coexistence of Nuclear Inclusions in Salivary Glands and Kidneys of Wild Rats.*

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The purposes of this study were: (1) To ascertain whether intranuclear inclusions, similar to those found in wild rats in England[1, 2] and China,[3, 4] occur also in the United States. (2) To discover whether, if present, they are restricted to salivary glands as has been described.[3] (3) To demonstrate whether a virus, responsible for their formation, is transmissible to laboratory rats.

A series of 120 wild rats was collected at 16 different locations in St. Louis. All were trapped or shot on rubbish heaps, except 8 which were captured at a meat packing plant; and all were brown

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3 Larsell, O., and Dow, R. S., *Am. J. Anat.*, 1933, **52**, 125.

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2 Hindle, E., *Nature*, 1932, **129**, 796.

3 Kuttner, A. G., and Wang, S. H., *J. Exp. Med.*, 1934, **10**, 773.

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