Stapedial artery in rat: an anatomical study

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SUMMARY

Objective: The thorough knowledge about anatomy and morphology of the stapedial artery is of such importance to the laryngologist. In rat this artery persists throughout life. The following study was performed to analyze the morphology and course of stapedial artery in rat.

Methods: 30 Wistar rats weighing 300–400 g were used to analyze the stapedial artery. After the anesthetic induction with ether, the lethal doses of thiopental were administered. The stapedial arteries were dissected after latex injection and an immersion and preservation in 9% formalin solution.

Results: The stapedial artery branches off internal carotid artery and course through the stapes. After that it gives middle meningeal artery and continues in a bony canal laterally to the tegmen tympani. In the orbit stapedial artery gives off ophthalmic artery to supply mainly the orbit structures (muscles, lacrimal gland and eyeball) and the infraorbital artery with palatine artery. Additionally, the ophthalmic artery gives off the central retinal artery.

Conclusion: Our study reveals that the stapedial artery and its distal branches are the only vessels supplying all tissues of the orbit, including the eyeball in rats.

Hasła indeksowe: tętnica strzemiączkowa, anatomię, tętnica środkowa siatkówki, gałka oczna

Key words: stapedial artery, anatomy, middle meningeal artery, central retinal artery, eyeball