

THE TOPOGRAPHY OF THE SALIVARY AND LACRIMAL GLANDS OF THE RAT

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The salivary and lacrimal glands of the rat are frequently used for experiment. Nevertheless, there is no systematic description of them in Russian. Furthermore, in the widely distributed manual, "The Rat," by P. P. Gambaryan and N. M. Dukel'skaya [4] there is a serious error; the parotid gland is described as the external orbital or lacrimal gland. This erroneous description has led to the appearance of a number of works, including some in Russian, in which instead of the parotid gland the external orbital gland was used [1, 2, 3]. In the manual to which we have referred no description is given of the two pairs of lacrimal glands which are convenient for various experimental purposes. A good description of the salivary and lacrimal glands is given by Green [5, 6].

The external orbital gland lies in front of and somewhat below the external meatus of the ear. It is compact, oval, and surrounded by a well-formed capsule. The duct of the external orbital gland enters the conjunctiva at the outer angle of the orbit, having first joined the duct of the internal orbital gland. The internal orbital gland (gland of Lewenthal) is triangular in shape and lies lateral to the angle of the orbit. In some descriptions [7], the external orbital gland is called the subparotid gland or gland of Lewenthal. Between the internal orbital gland and the eyeball lies a small Harderian gland. The parotid gland lies dorsal and caudal to the external auditory meatus. It is not compact in structure and reaches a considerable distance down along the lateral surface of the neck. In front, it is in contact with the external orbital gland and its duct passes beneath the latter, and pierces the masseter muscle parallel with the buccal and mandibular branches of the facial nerve. The duct opens opposite the molar teeth. The submaxillary glands are elongated and convex and lie in the anterior part of the neck on both sides of the midline. A distinctive feature is that they are contained in a single capsule together with the large sublingual gland, and open in a common duct into the oral cavity in the plica sublingualis. Above, the submaxillary gland is covered by numerous large lymphatic vessels. The small sublingual gland covers the lateral surface of this duct and opens into the oral cavity by a separate duct.

SUMMARY

The external orbital lacrimal gland has been erroneously described in the manual, "The Rat", by P. P. Gambaryan and N. M. Dukel'skaya as the parotid salivary gland. Because this error has been repeated in a number of experiments [1, 2, 3], a brief description of the position of these glands in the rat has been given.

LITERATURE CITED

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