

lateral aspect of the fasciculus cuneatus, and is separated from the surface of the medulla oblongata by a band of nerve fibers which form the spinal tract (spinal root) of the trigeminal nerve. Narrow below, this elevation gradually expands above, and ends, about 1.25 cm. below the pons, in a tubercle, the **tubercle of Rolando** (*tuber cinereum*).

The **upper part** of the posterior district of the medulla oblongata is occupied by the **inferior peduncle**, a thick rope-like strand situated between the lower part of the fourth ventricle and the roots of the glossopharyngeal and vagus nerves. The inferior peduncles connect the medulla spinalis and medulla oblongata with the cerebellum, and are sometimes named the **restiform bodies**. As they pass upward, they diverge from each other, and assist in forming the lower part of the lateral boundaries of the fourth ventricle; higher up, they are directed backward, each passing to the corresponding cerebellar hemisphere. Near their entrance, into the cerebellum they are crossed by several strands of fibers, which run to the median sulcus of the rhomboid fossa, and are named the **striæ medullares**. The inferior peduncle appears to be the upward continuation of the fasciculus gracilis and fasciculus cuneatus; this, however, is not so, as the fibers of these fasciculi end in the gracile and cuneate nuclei. The constitution of the inferior peduncle will be subsequently discussed.

Caudal to the striæ medullares the inferior peduncle is partly covered by the corpus pontobulbare (Essick¹), a thin mass of cells and fibers extending from the pons between the origin of the VII and VIII cranial nerves.

Internal Structure of the Medulla Oblongata.—Although the external form of the medulla oblongata bears a certain resemblance to that of the upper part of the medulla spinalis, its internal structure differs widely from that of the latter, and this for the following principal reasons: (1) certain fasciculi which extend from the medulla spinalis to the brain, and *vice versa*, undergo a rearrangement in their passage through the medulla oblongata; (2) others which exist in the medulla spinalis end in the medulla oblongata; (3) new fasciculi originate in the gray substance of the medulla oblongata and pass to different parts of the brain; (4) the gray substance, which in the medulla spinalis forms a continuous H-shaped column, becomes greatly modified and subdivided in the medulla oblongata, where also new masses of gray substance are added; (5) on account of the opening out of the central canal of the medulla spinalis, certain parts of the gray substance, which in the medulla spinalis were more or less centrally situated, are displayed in the rhomboid fossa; (6) the medulla oblongata is intimately associated with many of the cranial nerves, some arising from, and others ending in, nuclei within its substance.

The Cerebrospinal Fasciculi.—The downward course of these fasciculi from the pyramids of the medulla oblongata and their partial decussation have already been described (page 761). In crossing to reach the lateral funiculus of the opposite side, the fibers of the lateral cerebrospinal fasciculi extend backward through the anterior columns, and separate the head of each of these columns from its base (Figs. 687, 688). The base retains its position in relation to the ventral aspect of the central canal, and, when the latter opens into the fourth ventricle, appears in the rhomboid fossa close to the middle line, where it forms the nuclei of the hypoglossal and abducent nerves; while above the level of the ventricle it exists as the nuclei of the trochlear and oculomotor nerves in relation to the floor of the cerebral aqueduct. The head of the column is pushed lateralward and forms the **nucleus ambiguus**, which gives origin from below upward to the cranial part of the accessory and the motor fibers of the vagus and glossopharyngeal, and still higher to the motor fibers of the facial and trigeminal nerves.

¹ Essick, Am. Jour. Anat., 1907.