

The **central** or **thalamic tract** of the cranial nerves is closely associated with the medial lemniscus. The fibers of the spinothalamic fasciculi are continued from the spinal cord into this tract which passes upward in the reticular formation and the tegmentum to the thalamus along the dorsal side of the median lemniscus. It receives fibers from the opposite terminal sensory nuclei of the vagus, glossopharyngeal, facial, trigeminal and probably the vestibular nerves. Many of the secondary sensory fibers of the trigeminal cross the raphé from its terminal nucleus and pass upward to the thalamus by a more or less separate but closely associated pathway known as the **central tract of the trigeminal nerve** which also lies on the dorsal aspect of the lemniscus. These two tracts give off collaterals to the posterior semilunar nucleus of the thalamus and terminate in the anterior semilunar nucleus of the ventro-lateral region of the thalamus sending collaterals into the zona incerta.

The fibers of the **rubrospinal tract** (*bundle of Monakow*) arise in the red nucleus, cross the midline in the decussation of Forel and pass downward in the formatio reticularis of the brainstem into the lateral funiculus of the spinal cord ventral to the crossed pyramidal tract.

The **lateral lemniscus** (*lemniscus lateralis*) comes to the surface of the mid-brain along its lateral sulcus, and disappears under the inferior colliculus. It consists of fibers from the terminal nuclei of the cochlear division of the acoustic nerve, together with others from the superior olivary and trapezoid nuclei. Most of these fibers are crossed, but some are uncrossed. Many of them pass to the inferior colliculus of the same or opposite side, but others are prolonged to the thalamus, and thence through the occipital part of the internal capsule to the middle and superior temporal gyri.

The **corpora quadrigemina** (Fig. 720) are four rounded eminences which form the dorsal part of the mid-brain. They are situated above and in front of the anterior medullary velum and superior peduncle, and below and behind the third ventricle and posterior commissure. They are covered by the splenium of the corpus callosum, and are partly overlapped on either side by the medial angle, or **pulvinar**, of the posterior end of the thalamus; on the lateral aspect, under cover of the pulvinar, is an oval eminence, named the **medial geniculate body**. The corpora quadrigemina are arranged in pairs (**superior and inferior colliculi**), and are separated from one another by a crucial sulcus. The longitudinal part of this sulcus expands superiorly to form a slight depression which supports the **pineal body**, a cone-like structure which projects backward from the thalamencephalon and partly obscures the superior colliculi. From the inferior end of the longitudinal sulcus, a white band, termed the **frenulum veli**, is prolonged downward to the anterior medullary velum; on either side of this band the trochlear nerve emerges, and passes forward on the lateral aspect of the cerebral peduncle to reach the base of the brain. The **superior colliculi** are larger and darker in color than the inferior, and are oval in shape. The **inferior colliculi** are hemispherical, and somewhat more prominent than the superior. The superior colliculi are associated with the sense of sight, the inferior with that of hearing.

From the lateral aspect of each colliculus a white band, termed the **brachium**, is prolonged upward and forward. The **superior brachium** extends lateralward from the superior colliculus, and, passing between the pulvinar and medial genicu-

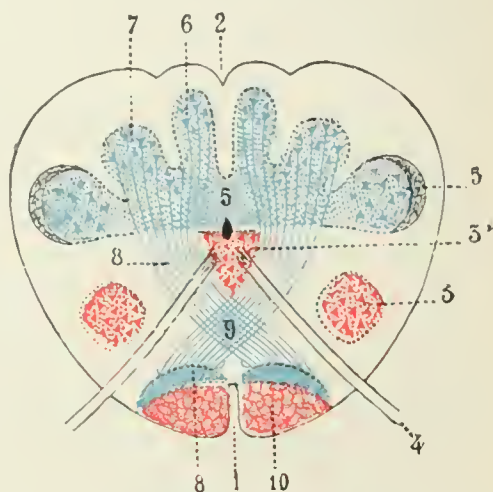


FIG. 714.—Transverse section passing through the sensory decussation. Schematic. (Testut.) 1. Anterior median fissure. 2. Posterior median sulcus. 3, 3'. Head and base of anterior column (in red). 4. Hypoglossal nerve. 5. Bases of posterior column. 6. Gracile nucleus. 7. Cuneate nucleus. 8, 8. Lemniscus. 9. Sensory decussation. 10. Cerebrospinal fasciculus.