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Monophthalmos in a Horse.

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THIS specimen (see Fig.), the head of a foal, is an example of monophthalmos in the horse. Besides the single median eye it presents other abnormal features. The lower jaw projects five cm. beyond the upper and the external nares are absent, but the muzzle is distinct. The roof of the cranial cavity presents a dome-shaped elevation corresponding to the cerebellum. The single eye is circumscribed by eyelids, one dorsal and two ventral, the dorsal being well supplied with long eyelashes which are absent on the lower eyelids. They are also inextensive, a large part of the eyeball being thus uncovered, giving the eye a large size. Accompanying this anomaly are also many modifications. In the lacrimal apparatus the lacrimal gland is absent. A punctum lacrimale is situated in the angle formed by the two lower eyelids and opens into a lacrimal sac but there are no nasolacrimal ducts. The pharynx is very small, the soft palate extending from the epiglottis to the arytenoid cartilages, and the posterior nares are not represented.

The skull resembles a normal one in which the orbits have shifted medially and fused. The single orbit has a complete bony wall dorsally and ventrally while laterally it is open. Situated in the ventral wall of the orbit about 1.5 cm. apart are the maxillary foramina. Just cranial to the orbital rim are the infra-orbital foramina about 1.5 cm. apart. The cranial cavity is normal in size. The floor slopes in a caudal and ventral direction. Cranially the crista galli and cribriform plates are absent. There is one optic foramen medially and it is flanked on either side by the foramina orbitale and rotundum. All the other foramina are normal except the ethmoid which is absent.

The cranial part of the brain has developed only very slightly, the cerebrum being the size of a walnut. The posterior part of the brain has developed fully, the medulla oblongata forming a right angle with the rest of the brain. Due to the lack of development in the cranial part of the brain the different structures are not clearly differentiated. The olfactory lobes, olfactory striae and olfactory nerves are absent. The cerebral peduncles, mamillary body and tuber

cinereum are indistinguishable. The only structure plainly discernible is the hypophysis, while the optic chiasma is an indistinct mass from which the single optic nerve, small in size, leads. The meninges are apparently normal.

The specimen which was found in the Anatomical Museum in 1926 has no available history. It was given the (Path.) No. 15376.

