

length of the lateral wall of the nose, is broader in front than behind, and presents anteriorly the lower orifice of the nasolacrimal canal.

The **Anterior Nasal Aperture** (Fig. 181) is a heart-shaped or pyriform opening, whose long axis is vertical, and narrow end upward; in the recent state it is much contracted by the lateral and alar cartilages of the nose. It is bounded *above* by the inferior borders of the nasal bones; *laterally* by the thin, sharp margins which separate the anterior from the nasal surfaces of the maxillæ; and *below* by the same borders, where they curve medialward to join each other at the anterior nasal spine.

The **choanæ** are each bounded *above* by the under surface of the body of the sphenoid and ala of the vomer; *below*, by the posterior border of the horizontal part of the palatine bone; *laterally*, by the medial pterygoid plate; they are separated from each other by the posterior border of the vomer.

DIFFERENCES IN THE SKULL DUE TO AGE.

At birth the skull is large in proportion to the other parts of the skeleton, but its facial portion is small, and equals only about one-eighth of the bulk of the cranium as compared with one-half in the adult. The frontal and parietal eminences are prominent, and the greatest width of the skull is at the level of the latter; on the other hand, the glabella, superciliary arches, and mastoid processes are not developed. Ossification of the skull bones is not completed, and many of them, *e. g.*, the occipital, temporals, sphenoid, frontal, and mandible, consist of more than one piece. Unossified membranous intervals, termed *fontanelles*, are seen at the angles of the parietal bones; these fontanelles are six in number: two, an anterior and a posterior, are situated in the middle line, and two, an antero-lateral and a postero-lateral, on either side.

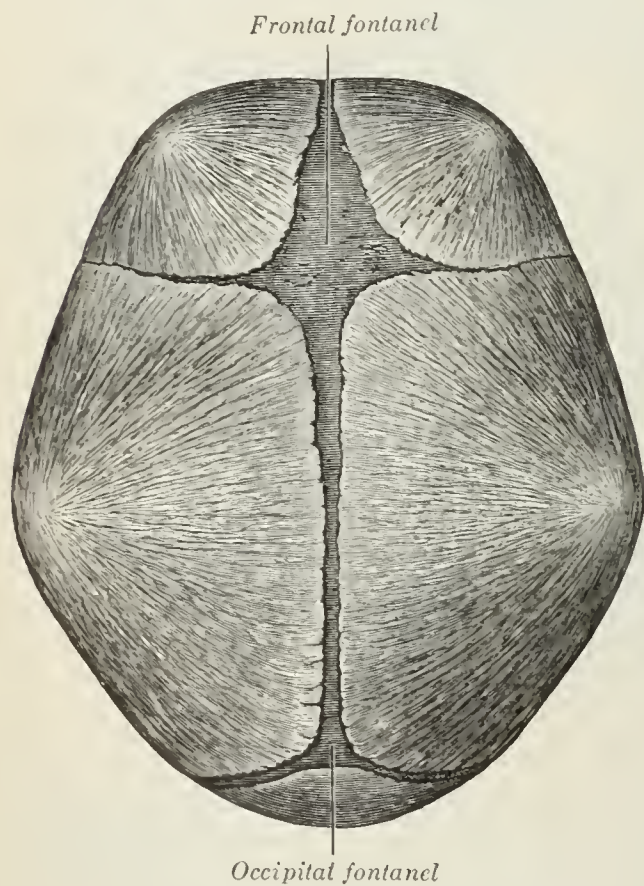


FIG. 197.—Skull at birth, showing frontal and occipital fonticuli.

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The *anterior* or *bregmatic fontanelle* (Fig. 197) is the largest, and is placed at the junction of the sagittal, coronal, and frontal sutures; it is lozenge-shaped, and measures about 4 cm. in its antero-posterior and 2.5 cm. in its transverse diameter. The *posterior fontanelle* is triangular in form and is situated at the junction of the sagittal and lambdoidal sutures. The *lateral fontanelles* (Fig. 198) are small, irregular in shape, and correspond respectively with the sphenoidal and mastoid angles of the parietal bones. An additional fontanelle is sometimes seen in the sagittal suture at the region of the obelion. The fontanelles are usually closed by the growth and extension of the bones which surround them, but sometimes they are the sites of separate ossific centers which develop into sutural bones. The posterior and lateral fontanelles are obliterated within a month or two after birth, but the anterior is not completely closed until about the middle of the second year.

The smallness of the face at birth is mainly accounted for by the rudimentary condition of the maxillæ and mandible, the non-eruption of the teeth, and the small size of the maxillary air sinuses and nasal cavities. At birth the nasal cavities lie almost entirely between the orbits, and the lower border of the anterior nasal aperture is only a little below the level of the orbital floor. With the eruption of the deciduous teeth there is an enlargement of the face and jaws, and these changes are still more marked after the second dentition.

The skull grows rapidly from birth to the seventh year, by which time the foramen magnum and petrous parts of the temporals have reached their full size and the orbital cavities are only a little smaller than those of the adult. Growth is slow from the seventh year until the approach