of the vaginal process and the medial border of the scaphoid fossa is named the **pterygoid tubercle**, and immediately above this is the posterior opening of the pterygoid canal. On the under surface of the vaginal process is a furrow, which is converted into a canal by the sphenoidal process of the palatine bone, for the transmission of the pharyngeal branch of the internal maxillary artery and the pharyngeal nerve from the sphenopalatine ganglion. The pharyngeal aponeurosis is attached to the entire length of the posterior edge of the medial plate, and the Constrictor pharyngis superior takes origin from its lower third. Projecting backward from near the middle of the posterior edge of this plate is an angular process, the **processus tubarius**, which supports the pharyngeal end of the auditory tube. The anterior margin of the plate articulates with the posterior border of the vertical part of the palatine bone.

The Sphenoidal Conchæ (*conchæ sphenoidales; sphenoidal turbinated processes*). —The sphenoidal conchæ are two thin, curved plates, situated at the anterior and lower part of the body of the sphenoid. An aperture of variable size exists in the anterior wall of each, and through this the sphenoidal sinus opens into the nasal cavity. Each is irregular in form, and tapers to a point behind, being broader and thinner in front. Its upper surface is concave, and looks toward the cavity of the sinus; its under surface is convex, and forms part of the roof of the corresponding nasal cavity. Each bone articulates in front with the ethmoid, laterally with the palatine; its pointed posterior extremity is placed above the vomer, and is received between the root of the pterygoid process laterally and the rostrum of the sphenoid medially. A small portion of the sphenoidal concha sometimes enters into the formation of the medial wall of the orbit, between the lamina papyracea of the ethmoid in front, the orbital plate of the palatine below, and the frontal bone above.

Ossification.—Until the seventh or eighth month of fetal life the body of the sphenoid consists of two parts, viz., one in front of the tuberculum sellæ, the *presphenoid*, with which the small wings are continuous; the other, comprising the sella turcica and dorsum sellæ, the *postsphenoid*, with which are associated the great wings, and pterygoid processes. The greater part of the bone is ossified in cartilage. There are fourteen centers in all, *six* for the presphenoid and *eight* for the postsphenoid.

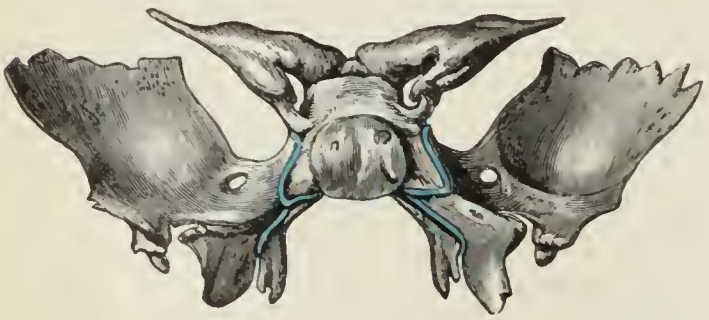

Fig. 148.—Sphenoid bone at birth. Posterior aspect.

Presphenoid.—About the ninth week of fetal life an ossific center appears for each of the small wings (orbitosphenoids) just lateral to the optic foramen; shortly afterward two nuclei appear in the presphenoid part of the body. The sphenoidal conchæ are each developed from a center which makes its appearance about the fifth month;[1] at birth they consist of small triangular laminæ, and it is not until the third year that they become hollowed out and cone-shaped; about the fourth year they fuse with the labyrinths of the ethmoid, and between the ninth and twelfth years they unite with the sphenoid.

Postsphenoid.—The first ossific nuclei are those for the great wings (ali-sphenoids)[2]. One makes its appearance in each wing between the foramen rotundum and foramen ovale about the eighth week. The orbital plate and that part of the sphenoid which is found in the temporal fossa, as well as the lateral pterygoid plate, are ossified in membrane (Fawcett)[3]. Soon after, the centers for the postsphenoid part of the body appear, one on either side of the sella turcica, and become blended together about the middle of fetal life. Each medial pterygoid plate (with the exception of its hamulus) is ossified in membrane, and its center probably appears about the ninth or tenth week; the hamulus becomes chondrified during the third month, and almost at once undergoes

[1] According to Cleland, each sphenoidal concha is ossified from four centers.
[2] Mall, Am. Jour. Anat., 1906, states that the pterygoid center appears first in an embryo fifty-seven days old.
[3] Journal of Anatomy and Physiology, 1910, vol. xliv.