

proper, is developed in connection with the superior orbital artery, and occupies the upper and posterior part of the orbital cavity. The second plexus, which is composed of larger vessels than those of the orbital plexus, may be named the maxillary plexus. It lies in contact with the upper surface of the pterygoid muscle, and is formed by the anastomosis of branches derived principally from the inferior orbital artery, to which, however, are united a large branch of the palatine, and a communicating branch of considerable size, which unites the orbital with the maxillary plexus.

II.—The Bronchial Arteries

Come off from the aorta, just beyond the arch. They pass transversely outwards, and enter the lungs along with the other constituents of the root.

III.—The Intercostal Arteries

Are six to nine in number on either side. They are distributed to the intercostal spaces. The anterior arteries follow an oblique course forwards and outwards, while the posterior course almost transversely outwards. These arteries, for the most part, lie in the hollowed lateral surfaces of the bodies of the vertebræ, but the anterior, owing to their oblique course, cross the bodies of two or more vertebræ.

IV.—The Cœliac Axis.¹

The cœliac axis arises from the abdominal aorta, opposite the head of the seventh vertebral rib. It passes obliquely downwards and backwards, and immediately above the right lobe of the liver divides into the four following branches,—the splenic, anterior gastric, posterior gastric, and intestinal arteries.

(1) *The Splenic Arteries* are three or four in number. They are short arteries of small size, which at once enter the substance of the spleen.

(2) *The Anterior Gastric Artery* is of considerable size. It passes horizontally backwards to reach the right margin of the stomach, along which it travels backwards as far as the angle of junction of the glandular and muscular portions of that viscus, where it breaks up into its terminal twigs. As it passes backwards, the anterior gastric artery

¹ Reid (Proc. Zool. Soc., 1835, p. 145) thus describes the distribution of the cœliac axis in *Aptenodytes patachonica*:—"The cœliac axis comes off on a level with the fifth rib; it passes a little forwards, and divides into the *coronaria ventriculi*, the hepatic, and the splenic. The *coronaria ventriculi*, just after its origin, divides into the superior and inferior coronaries: the superior passes round the large curvature of the stomach, and near the *pylorus* gives off the superior pyloric and left hepatic; the inferior passes down the right side of the stomach, and disappears at the *pylorus*, being here minutely ramified upon it. The hepatic gives off the right gastro-epiploic, which goes on the inferior angle of the stomach; and the right gastric, which goes on the *pylorus* and superior part of the stomach, anastomosing with the superior pyloric and inferior coronary arteries. The splenic gives off a small artery distributed on the cardiac portion of the stomach, and some *vasa brevia*, which are distributed to the left portion of the stomach." In respect of details this description does not correspond with what I have seen in any species of Penguin, in all of which the arteries are distributed as described in the text.