THE MORPHOLOGY OF THE COLLATERAL AND TERMINAL BRANCHES OF THE CAELIAC ARTERY IN GOOSE

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Summary

The work was monitored celiac artery dissection, its relations with the viscera and various distribution options. There have been photographed the most interesting aspects. Description of formations was correlated with Nomina Anatomica Avium and Nomina Anatomica Veterinaria

Key words: caeliac artery, goose

In the literature are relatively briefly discussed aspects regarding the vasculature of the abdominal cavity organs in birds (1,3, 4, 5). Most of these relate mainly to the gross anatomy of the viscera (2, 6, 7, 8). For these reasons we have studied the subject of this work.

Materials and methods

The study has been made on pieces taken from 8 geese. The work material used was the digestive system and the segment form the descendent aorta were the caeliac artery has its origins.

After that, the vascular bad was washed with physiological serum, and vessels the were injected with coloured plastic material (red-AGO).

At the end the pieces had been put in formaldehyde for 2-3 days, and then the arteries with origins in the caeliac artery were dissected till the visibility limit.

Description of formations was correlated with NAA-(9, 10).

Results and discussions

The caeliac artery in goose tears apart from the descendent aorta and after a short trajectory of approximately 2 cm, from this aorta tears apart the cranial proventriculary artery.

This artery of approximately 1 cm from its origin touches the cranial extremity of glandular stomach at its limit with the oesophagus.

After it gives this branch, the caeliac artery orients oblique caudal ventral, and after a trajectory of approximately 3 cm gives an obvious spleen cranial branch that touches the spleen in the third cranial part of the ventral edge. At approximately 2 mm from the emission of this spleen artery, the caeliac artery ends with a right caeliac branch and with a left one (fig. 1).

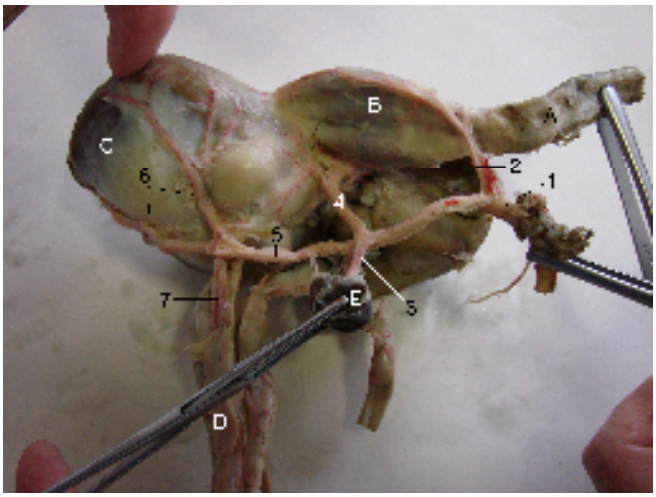

Fig.1. Image regarding the caeliac artery and its terminals
1.caeliac artery; 2. proventriculary cranial artery; 3. spleen cranial artery; 4. left branch of the caeliac artery; 5. right branch of the caeliac artery; 6. right gastric artery; 7. pancreatic duodenal artery. A.oesophagus; B. proventriculary; C. muscular stomach; C. duodena; D. spleen

The left caeliac branch at approximately 1 cm from its origin realises a bending with the cranial concavity at the ventral side of the junction between the glandular stomach and the muscular one. From the converse side of the bending tears apart a branch that realises many branches on the right side of the intermediary cranial muscle (fig. 2)

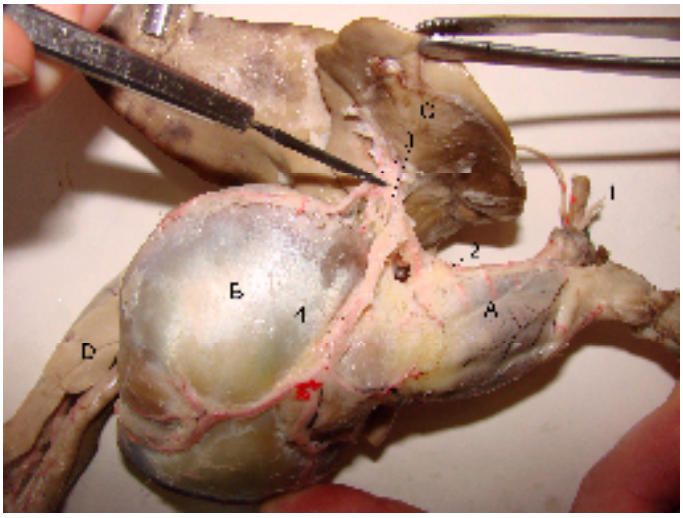

Fig.2. Image regarding the distribution of the left gastric artery
1. caeliac artery; 2. caudal proventriculary artery; 3. hepatic branches; 4. left gastric artery. A. proventriculary; B. muscular stomach; C. the left lobe of the liver; D. pancreas

From the concavity of this bending tears apart the caudal proventriculary artery.

In the end the left branch of the caeliac artery passes through the left side of the muscular stomach as a left gastric artery.

The right branch of the caeliac artery has its origin in the approximately same calibre with the left caeliac branch. In the proximity of its origin tears apart the hepatic artery that breaks through the deepness of the liver (at the dorsal side of the right lobe) passing along the cranial edge of the vezica fellea.

At approximately 1 cm from the hepatic artery from the right branch of the caeliac artery tears apart a short, thin and sinuous spleen caudal artery that passes through the caudal extremity of spleen.

At approximately 2 cm from the emission of the caudal spleen artery, the right branch of the caeliac artery continues as a gastric duodenal artery. The last one ends with a pancreatic duodenal artery and with the right gastric artery.

The right gastric artery having a very short trunk ends with a dorsal cranial branch and with ventral caudal one.

The pancreatic duodenal artery passes through the duodenal concavity passing initially along the superior edge of the dorsal lobe, and then appears covered by this one, between the lobe and the descendent branch of the duodena (fig. 3).

In the caudal half of the duodenal concavity, the pancreatic duodenal artery is included in the thickness of the peritoneum and it can be followed till the level of the posterior bending of the duodenal.

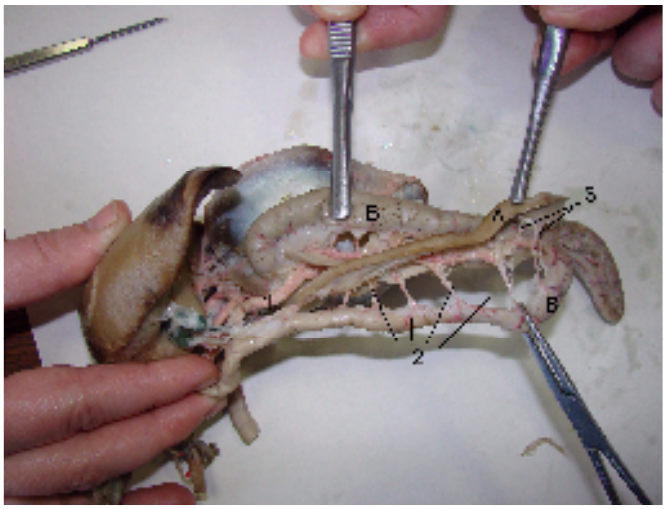

Fig.3. Detailed image regarding the distribution of the pancreatic duodenal artery
1. pancreatic duodenal artery; 2. duodenal branches; 3. pancreatic branches. A. pancreas; B. duodena

The pancreatic and duodenal collaterals tear apart, on the trajectory, from the pancreatic duodenal artery. The pancreatic collaterals are short, thin, and many. The ventral lobe of the pancreas that has a reduced volume is irrigated in the third cranial part by the short collateral, by in great number. In the third caudal part the ventral lobe is irrigated through 3-4 pancreatic branches relatively long.

The duodenal branch surrounds the duodena from the small bending makes branches on the both sides of this one.

Conclusions

In goose case, before ends with a right caeliac branch and with a left one the caeliac artery gives as primary collateral a proventriculary cranial artery, and ulterior an obvious spleen cranial branch.

The left branch of the caeliac artery will end as a left gastric artery, after it gives on the trajectory branches on the right side of the intermediary cranial muscle and of the proventriculary caudal artery.

The right branch of the caeliac artery gives in the proximity of its origin a hepatic artery, and then a caudal spleen artery and continues in the end as a gastric duodenal artery.

The big terminal of the gastric duodenal artery is the pancreatic duodenal artery which assures the irrigation of the duodena and pancreas, and of the pancreatic branches given on the trajectory, which have a variable length and calibre.

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