



CASE STUDY OF ABERRANT SPLENIC ARTERY ANEURYSM - A COMPLICATION IN A RARE ANATOMICAL VARIATION OF SPLENIC ARTERY

Radiodiagnosis

Dr Archit Gupta MD Radiodiagnosis, byl Nair Ch. Hospital, Mumbai

Dr Deepak Varshney* MD Radiodiagnosis, fellow In Byl Nair Ch. Hospital *Corresponding Author

ABSTRACT

The first anterior branch of abdominal aorta is the celiac trunk which has a short course and divides into three branches the common hepatic, left gastric and splenic arteries. Quite commonly, we see anatomical variations in the gastric and the hepatic arteries. However a relative constant branch of the celiac artery is the splenic artery and aberrances in the origin of the splenic artery are rarely seen. Superior Mesenteric Artery is the second anterior branch of abdominal aorta which arises at the level of the first lumbar vertebra.

This is a case of aneurysm arising from the aberrant splenic artery which is not following the normal origin and course; instead, it arises from the right antero lateral side of SMA which was first diagnosed on ultrasound (gray scale and Doppler) and confirmed on CECT abdomen.

KEYWORDS

INTRODUCTION:

The largest branch of the celiac trunk is the splenic artery. It gives the short gastric, the left gastroepiploic, the posterior gastric, and the branches to the pancreas. In this way this gives arterial supply to the pancreas, stomach, greater omentum and spleen. However, there are variations do exist with its anatomy and origin, but rare.

The splenomesenteric trunk term is used for common artery from which aberrant splenic artery arises and further continues as SMA; which is seen in less than 1% of patients[1].

Case report

A female patient with age 35 year was admitted in department of surgery in our institute with the complaint of vague abdominal pain for a few days with mild generalised weakness. No history of pancreatitis/trauma/vascular disorder. No history of fever. Clinical examination and most of the investigations did not reveal any abnormality. She was referred to department of radiology for abdominal ultrasound (gray scale and Doppler) which reveals-a well defined anechoic outpouching measuring 2.6 x 2.1 cms seen arising from the proximal part of the splenic artery and approximately 1.6 cm from origin of SMA, showing swirling flow on color Doppler.

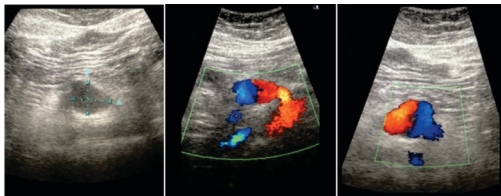


Figure1— abdominal ultrasound (gray scale and Doppler) images shows aberrant splenic artery arises from SMA (splenomesenteric trunk)

CECT abdomen with CT abdominal angiography was done further to confirm the diagnosis.

CT angiography reveals abnormal origin of splenic artery from the right antero-lateral aspect of SMA (splenomesenteric trunk). A sacular aneurysm measuring 26x 21x 20 mm is arising from aberrant splenic artery 16mm distal to ostia of SMA. (Figure 2, 3). However no other gross abnormality seen in CECT abdomen.

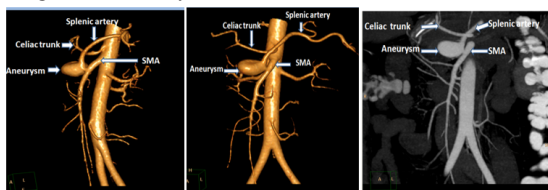


Figure2— VRT images shows aberrant splenic artery arises from SMA -splenomesenteric trunk

CONCLUSION

According to most of the studies 85-90% of cases have normal celiac trunk anatomy (2-4). Few frequent anatomical variations includes Hepatomesenteric (replaced hepatic artery) and celiacomesenteric (common celiac axis and superior mesenteric) trunks. However an aberrant splenic artery origin from SMA (splenomesenteric trunk) is very rare and occurs approximately in less than 1% of population (5, 6).

A study conducted in India, dissection was done in 50 cadavers, normal celiac trunk anatomy was found in 86% of cadavers, however in one case, all three branches was seen to arise directly from the abdominal aorta (7). In another study a case with gastroduodenal-splenic trunk variation were recognized, where it give rise to the splenic and gastroduodenal arteries (8).

On the other side, aneurysms of splenic artery are the most common visceral artery aneurysms (9). Aberrant splenic artery aneurysm is very rare approximately 25 cases reported in literature (10).

Prior knowledge of this variation is helpful in intravascular intervention planning, or surgical planning to avoid injuries to major arteries and organs, as it is required in our patient with aberrant splenic artery aneurysm.

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