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Anamolous Origin of Left Gastric Artery – A Case Report.

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ABSTRACT:
Left gastric artery, is a branch of coeliac trunk along with the splenic and common hepatic artery. Coeliac trunk variations are relatively uncommon. Among these, the variations of common hepatic and the splenic arteries are frequently encountered. The variations of the left gastric arteries are found only in 2% of the cases. Here, we present a case of anomalous originof the left gastric artery.

I. INTRODUCTION:

Coeliac trunk is one of the important branches of the ventral abdominal aorta, and together with superior and inferior mesenteric arteries participate in the vascular supply to the upper abdominal viscera through multiple anastomoses [1]. Out of the three ventral branches of abdominal aorta, the coeliac trunk is more prone to have variations [2]. Presence of coeliac trunk pattern is found in 84% of the cases. Absence of celiac trunk is seen in <1% of cases. Incomplete coeliac trunk group is seen in 9% of cases. The coeliac axis dividing into the common hepatic artery, splenic artery, left gastric arteries is known as coeliac trifurcation.(

II. CLINICAL HISTORY:

A 72yr old male patient came to the hospital with complaints of right sided abdominal pain since 2 months. Ultrasound abdomen was done and showed right gross hydroureteronephrosis with severe thinning of right renal parenchyma with cortical thickness measuring 3mm. Patient was already a known case of chronic kidney disease and posted for right nephrectomy in view of non-functioning of right kidney. CECT abdomen with triple phase and delayed phase was done to evaluate kidneys. A large calculus measuring 20mm noted in the right proximal ureter causing gross upstream dilatation of right proximal ureter and pelvicalyceal system. No contrast enhancement was noted in the right kidney and ureter suggesting a non-functional right kidney. Arterial phase showed a vascular structure directly arising from the abdominal aorta at D12 vertebral body level adjacent to the celiac trunk. This structure was seen extending into the lesser curvature of the stomach. Common hepatic artery and splenic artery were seen normally arising from the coeliac trunk. Superior mesenteric trunk, bilateral renal arteries, inferior mesenteric trunk, bilateral common iliac arteries were normal. The venous system of the visualized abdomen is normal. Rest of the abdomen was normal.

III. DISCUSSION.

Naidich J.B et al[3] reviewed 500 coeliac angiograms and found anomalous origin of left gastric artery arising directly from aorta in 13 cases and also found that in 14 cases the left gastric artery supplying liver mainly and partially the stomach. Jacob N et al [4] observed in a 72 year old male patient on MDCT the direct origin of left gastric artery, common hepatic and splenic arteries from aorta with absent coeliac trunk . Vascular anomalies are usually asymptomatic. In many instances, the anomalies are found incidentally when the patient undergoes imaging for other complaints. But the knowledge of the vascular abnormalities (if present any) should be diagnosed and documented as it is important when the patient undergoes any surgical managements, interventional procedures, for gastrointestinal bleeding, coeliac axis compression syndromes, liver transplantation and prior to any operative procedures for successful outcomes [5].The most common anatomical variation is the presence of coeliac trunk with bifurcation [1]. The other anomalies can be absence of coeliac trunk, origin of common hepatic, splenic arteries directly from the abdominal aorta, abnormal tortuous course of splenic artery.

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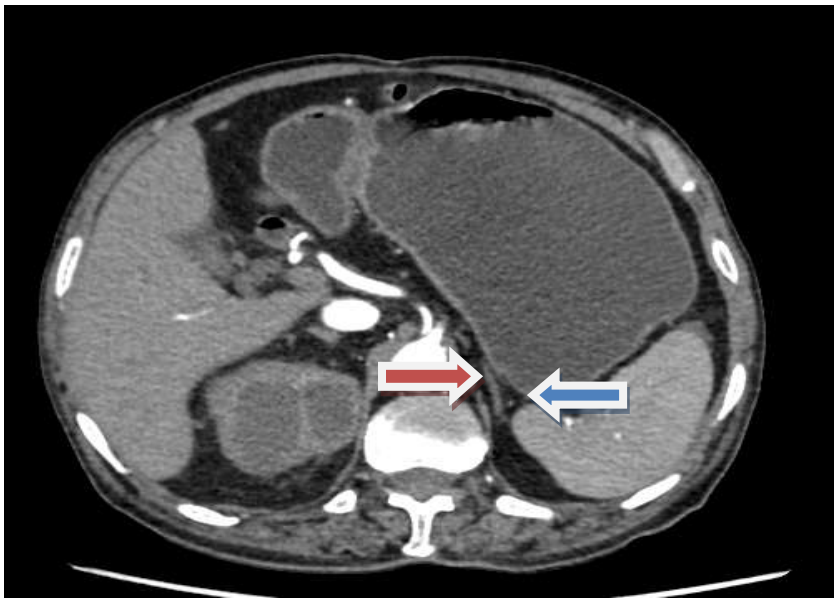
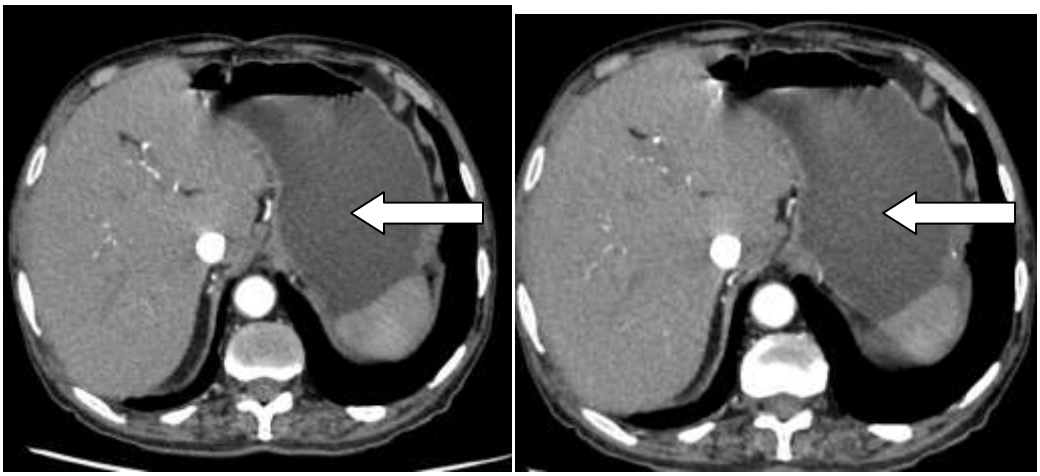
LEGENDS



Axial contrast enhanced arterial phase image at D12 vertebral level showed a vascular structure (red arrow) directly arising from the abdominal aortajust adjacent to the coeliac trunk (blue arrow) to the right of the coeliac trunk.



Axial contrast enhanced arterial phase image showed the vascular structure extending along the lesser curvature of the stomach (arrow)and supplying the stomach.

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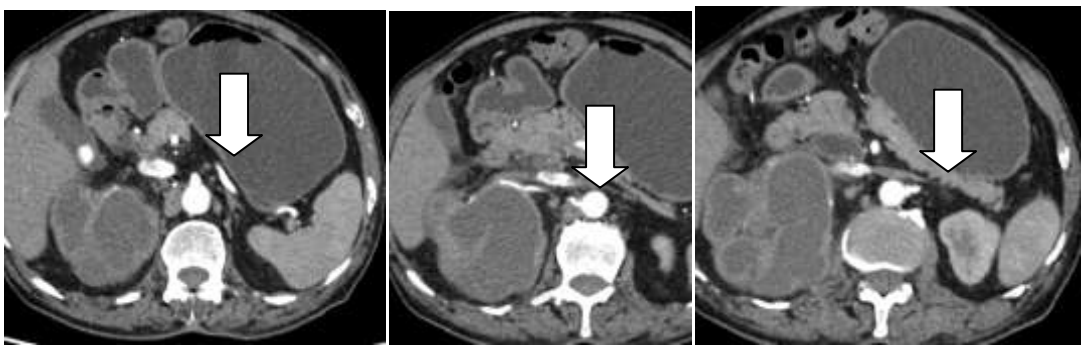

Fig a. Fig b. Fig c.

Axial contrast enhanced arterial phase images showing the normal origin of superior mesenteric artery (Fig a), right renal artery (Fig b)and left renal arteries(Fig c).

3D reconstructed MIP sequences showed the vascular structure (red arrow) arising directly from the abdominal aorta proximal to the coeliac trunk (arrow).