



MESENTERIC PANNICULITIS WITH CONGENITAL APLASIA OF SEGMENT 5 OF RIGHT LOBE OF LIVER DETECTED IN A RURAL HOSPITAL SETUP

Radiodiagnosis

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ABSTRACT

Mesenteric panniculitis is a chronic and non specific disease with no specifically known etiology. It is mostly seen to manifest most commonly in the middle age group of 6th and 7th decades. CT is used to diagnose this disease mostly and surgical biopsies are the second diagnostic modality. Recently CT has served well in diagnosing this disorder. We present a case of mesenteric panniculitis presenting with a congenitally absent segment 5 of the right lobe of liver.

KEYWORDS

INTRODUCTION

Mesenteric panniculitis is the name of a disease which affects the fatty tissue of the mesentery causing focal inflammatory changes within it. The exact cause of this disease is still not known. It may manifest independently but has also been found in coexistence with certain other disorders such as pancreatitis, malignancies etc (1).

Clinical symptoms mostly include pain in abdomen, vomiting, loose stools. Laboratory investigations generally point towards an elevated erythrocyte sedimentation rate with other investigations revealing normal values(2). The mainstay of clinching the diagnosis of MP is biopsy but abdominal CT has turned out to be almost equally sensitive (3,4).

We present a case of mesenteric panniculitis presenting with a congenitally absent segment 5 of the right lobe of liver.

CASE REPORT

A 41 year old male reported to our hospital with chief complaints of abdominal pain predominantly in the periumbilical region with nausea and vomiting. Laboratory investigations revealed normal values for hepatic and renal function tests, blood profile was normal except a mildly elevated erythrocyte sedimentation rate.

On being advised abdomen ultrasonography, chief findings were focal areas of mesenteric fat showing increased echogenicity surrounding the mesenteric blood vessels in the periumbilical area of abdomen.

CT abdomen was carried out with administration of contrast thereafter revealing the same findings. It revealed ill defined focal hyperdense attenuating areas in the mesentery giving it a misty appearance – the misty mesentery. However there was no mass effect noted with no appreciable displacement of adjacent mesenteric blood vessels and small bowel loops. In addition to above findings, there was presence of “fat halo sign” encountered on sagittal sectional reconstructed CT images showing preservation of normal fat density in the fatty tissue surrounding the mesenteric vessels. A “tumoral pseudocapsule” sign was also encountered signifying a peripheral curvilinear band of soft-tissue attenuation limiting the ill defined mesenteric mass from the surrounding normal mesentery. The thickness of the tumoral pseudocapsule band of soft tissue was about 2 to 3 mm. However, the said focal mass lesions were not seen to involve the small bowel loops, just mildly displacing them. There was subcentimetric sized lymphadenopathy noted in addition to above findings.

These findings strongly suggested a diagnosis of focal mesenteric panniculitis. Biopsy could not be carried out due to non compliance of the patient. An incidental finding of aplasia of segment 5 of right lobe of liver was noted with hepatic flexure of large bowel loop seen insinuating into this area.

The patient was advised conservative line treatment.

DISCUSSION

Mesenteric panniculitis was first described by **Jura** in 1924 as “retractile mesenteritis”. Some years later, it was again labeled as “mesenteric panniculitis” by **Odgen** in the 1960s. Mesenteric panniculitis is referred to as a non specific inflammatory disorder which predominantly affects the mesentery - mainly targeting the fatty tissue present therein. Mesenteric panniculitis is a disease entity which is also thought to be the part of sclerosing mesenteritis as one of its intermediate stages. There is a mild predilection towards the male sex with this disease generally manifesting amidst the sixth and seventh decades of life(5,6,7,12).

This disorder manifests either in association with other disorders but may occur in solitude. Generally, it has been seen in association with cases of vascular inflammation, granulomatous diseases, autoimmune disorders, rheumatic disease, malignancies, pancreatitis, hypersensitivity reactions, ischemic disorders and as a sequel to abdominal trauma or surgery(5,14).

The characteristic imaging signs - the fat halo and tumoral pseudocapsule signs have been observed to have reported as 75% and 50%, respectively, in a series of 17 pathologically confirmed cases (8). Fat halo sign may also be seen in cases of mesenteric lymphoma (9,10) and the tumoral pseudocapsule sign may also be noted in cases of mesenteric lipomatous tumors (11).

There are some notable mimics of mesenteric panniculitis like mesenteric neoplasia – lipomatous tumours, desmoid tumours, carcinoid tumours and peritoneal carcinomatosis. But these disorders mostly overlap their imaging features with the later retractile stage of mesenteric panniculitis where there is certain amount of fibrosis, retraction and calcification within affected mesentery. Biopsy remains the mainstay in these scenarios. Still, mesenteric panniculitis has less number of mimics as there is no calcification and fibrosis in this stage.

CONCLUSION

Mesenteric panniculitis is a disease which hovers over a spectrum of 3 stages of its continuum – focal mesenteric lipodystrophy characterized by focal adipose tissue degeneration, inflammatory changes within the degenerated adipose tissue called as mesenteric panniculitis and retractile mesenteritis which is characterized by fibrosis and retraction of the affected adipose tissue of mesentery. The third stage also presents with focal calcification. CT scan serves as a very useful adjunct in making the diagnosis of this disease taking into account its different presentation during its different stages(3,4,13). Though biopsy is the gold standard, still CT stands tall for the said purpose no less. Radiologists should be aware of the varied presentation and appearance of this disease on various imaging modalities and thereby rightly pointing out the said diagnosis.



Image 1 :- Axial section computed tomography image at the level of liver showing congenital variant in the form of aplasia of segment 5 of right lobe of the liver. Also, the hepatic flexure is seen insinuating into the space created by segment 5 aplasia.

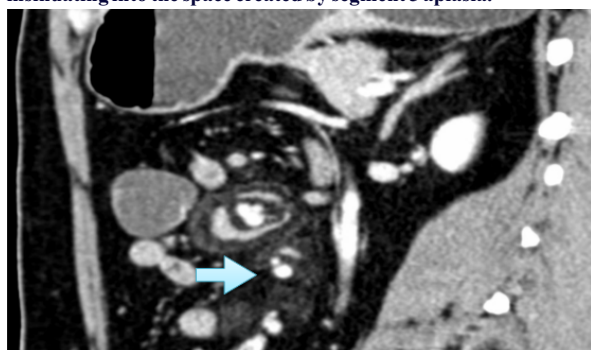


Image 2 :- Sagittal section computed tomography image of the abdomen showing the "tumoral pseudocapsule sign" in the form of a peripheral curvilinear band of soft-tissue attenuation limiting the ill defined mesenteric mass from the surrounding normal mesentery with maximum thickness of soft tissue about 2 to 3 mm. No mass effect is seen upon the adjacent bowel loops.

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