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Large Splenunculi Mimicking As Mesenteric Cyst

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Abstract
An accessory spleen is a small nodule of splenic tissue found apart from the main body of the spleen. It is also called as supernumerary spleen, splenule, or splenunculus. Present in up to 20% of the population, one or more accessory spleens may also occur in upto 30% of patients with hematologic disease and 10–44% of necropsies. Mostly it is asymptomatic and is found incidentally on Computed Tomography Scan or during other abdominal surgeries. It is symptomatic in few cases where it presents as a lump in abdomen. We present a case of large splenunculi presenting as a lump in abdomen. Patient underwent excision of the cyst with resection and anastomosis of the small bowel segment as it involved its mesentery in its entire breadth. A brief case report with review of literature is presented.

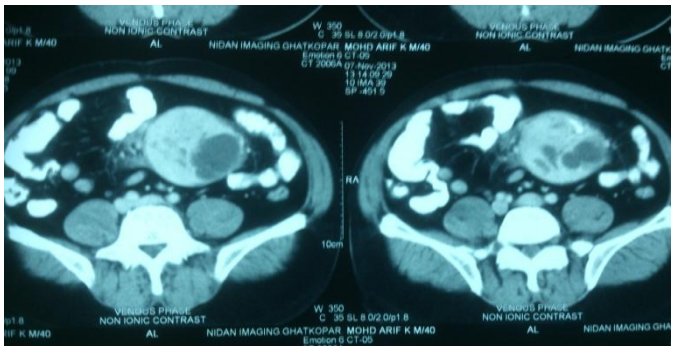
Introduction

Spleen is the largest reticuloendothelial organ in the body. The most common anomaly of splenic embryology is the accessory spleen consisting of an encapsulated mass of vascular and lymphoid tissue. Over 80% of accessory spleens are found in the region of splenic hilum and vascular pedicle.[1] Other locations for accessory spleens in descending order of frequency are the gastrocolic ligament, pancreatic tail, greater omentum, stomach's greater curve, splenocolic ligament, small and large bowel mesentery, left broad ligament in women and the left spermatic cord in men.[1] The typical size is approximately 1 centimeter, but sizes ranging from a few millimeters up to 2–3 centimeters are not uncommon. However, splenunculi presenting as a large lump in abdomen and mimicking a mesenteric cyst of a size as huge as 10cm x 10cm is an extremely rare entity. We present a case of large splenunculi mimicking mesenteric cyst involving the mesentery for which excision with resection of the bowel segment was done. Follow up of one year is uneventful.

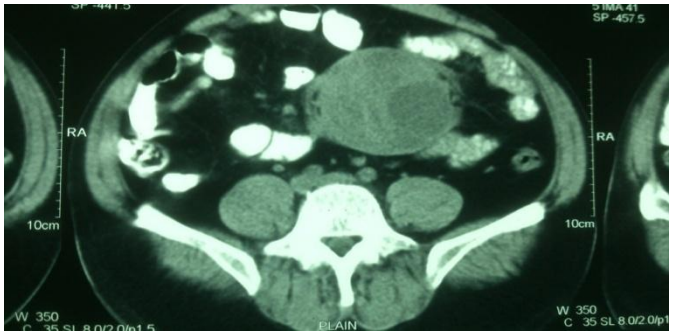
Case Report

A 40 year old male presented with complaint of lump in abdomen, in the umbilical region. It was insidious in onset, initially small to start with and gradually progressed over a period of 6 months. He also complained of pain in abdomen, dull aching, dragging in nature, nonradiating, with no aggravating or relieving factors, responding temporarily to analgesics.. Patient gave no history of fever, vomiting, constipation, loose motions, per rectal bleeding, hematemesis or malena. On examination, there was a lump, 8 x 7cm palpable in umbilical region, mobile, soft and cystic, with smooth surface and regular margins. Ultrasonography (USG) was suggestive of heterogenous lesion 7.2 x 6.6 x 6.3 cm seen in umbilical region with multiple cystic components within largest measuring 3.3 x 3.1 cm with mild vascularity. Contrast Enhanced Computed Tomography (CT)

of abdomen was suggestive of Mesenteric mass lesion 7.9 x 6.8 cm, hypodense, in the medial and left paramedian regions in the plane of bifurcation of aorta, with few calcific densities along the periphery of the lesion, possibility of neoplastic process with differential diagnosis as mesenteric carcinoid or gastrointestinal stromal tumor or lymphatous process (Fig Ia and Ib). Exploratory Laprotomy with a midline incision was done. Intraoperative findings revealed a large cyst in the mesentery of jejunum around 40 cm from duodenojejunal flexure. It was sharing vascularity with a jejunal segment. Resection of the jejunal segment along with the cyst was done (Fig 2a &2b). Jejuno Jejunal Anastomosis was done after resection of the jejunal segment. Histopathologic examination was suggestive of spleneculi with congestive changes and foci of septal calcification (gamna gandy bodies) (Fig 3). Immunohisto-chemistry was not done as histopathology was suggestive of splenunculi and Positron Emission Tomography scan was within normal limits with no areas of increased activity. Postoperative course was uneventful. Follow up of 1 year has shown him as disease and symptom free.



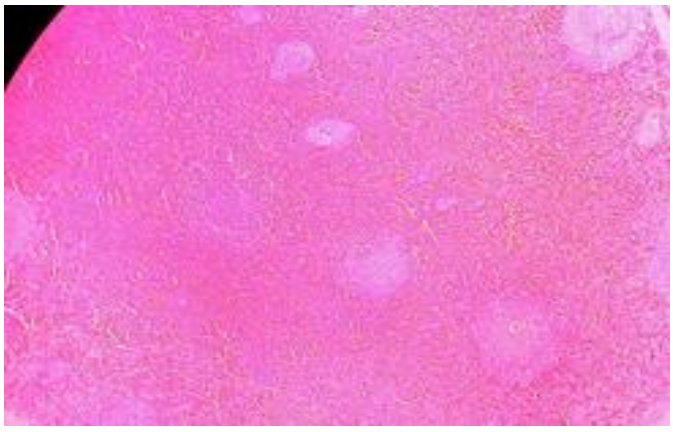
1a. CECT Abdomen s/o Mesenteric mass lesion, mesenteric cyst/splenunculi



1b. CECT Abdomen s/o Mesenteric mass lesion, mesenteric cyst/splenunculi, with cystic component within

2a. Resected jejunal segment along with the mesenteric cyst

2b. Large mesenteric cyst / splenunculi involving the entire mesentery



3. Histopathology, s/o spleneculi/ spleen with congestive changes and foci of septal calcification (gamna gandy bodies).

Discussion

The most common anomaly of splenic embryology is accessory spleen. Its incidence in the general population is up to 20%. Accessory spleens may be present in upto 30% of patients

with hematologic disease[1] and 10–44% of necropsies.[2] .They may be found anywhere along the splenic vessels, in the gastrosplenic ligament, the splenorenal ligament, the walls of the stomach or intestines, the pancreatic tail, the greater omentum, the mesentery or the gonads and their path of descent.[1] Size varies from a few millimeters to 2–3 centimeters.[1] By the fifth week of gestation the spleen is evident in an embryo 8mm long. It arises from the primitive mesoderm as an outgrowth of the left side of the dorsal mesogastrium. The organ continues its differentiation and migration to the left upper quadrant, where it comes to rest with its smooth, diaphragmatic surface facing posterosuperiorly. The imperfect fusion of the separate splenic masses gives rise to an accessory spleen. Most often there is one accessory spleen (85%) sometimes two (14%) and rarely three or more(1%).[2] Usually their size is not more than 2cm in diameter. The most common location is hilum of the spleen ingastrosplenic ligament (50%),[2] but may be found behind the tail of pancreas (30%) or rarely within greater omentum of the stomach, mesentery of the small intestine, mesocolon, pancreas[3], kidney[4]and pelvis asan adnexal mass[5]. Most of the splenunculi are asymptomatic and are discovered incidentally by abdominal ultrasound, CT scan orlaparotomy during the investigation of another problem. In a few cases they become symptomatic causing abdominal pain due to torsion and infarction.[6] Accessory spleen needs to be distinguished from splenosis which is an acquired condition associa-ted with splenic trauma or surgery having incidence of 67% in these patients.[7] Accessory spleens resemble normal spleen in structure and immunologic functions.

Single or multiple splenunculi are a common finding on modern cross-sectional imaging.[8] A mobile splenunculus however, as in this case, is a rare condition[8] that may be misdiagnosed as a peritoneal or metastatic deposit or lymphomas. The important diagnostic features are changing position on interval scanning and identification of a vascular supply. Presentation of splenunculi in the body has been documented as mimicking pancreatic neoplasm, GIST, renal cell carcinoma, adrenal mass, perotineal metastases, omental metastases, etc.[3,5,7,9,10] However, splenunculi masquerading as large mesenteric cyst, as in this case has not been documented in the literature. Normally accessory spleens are incidental radiologic or intraoperative finding. They are harmless and of lesser significance in most of the patients. Sometimes large splenunculi may present as lump in abdomen causing dragging pain in few patients, as in present case, and turn out to be of significant importance clinically. They may interfere with diagnostic evaluation while they mimic a large mesenteric cyst or lymphoma. The differential diagnosis includes intestinal duplication cyst; ovarian cyst, choledochal cyst, pancreatic cyst, splenic cyst, or renal cyst; hydronephrosis; cystic teratoma; hydatid cyst, and ascites.[11]

The most common mode of acute presentation in children is that of a small-bowel obstruction, which may be associated with intestinal volvulus or infarction. In present case, splenunculi presented as a large lump in abdomen mimicking a large mesenteric cyst. As it involved a large part of mesentery, resection and anastomosis of the jejunal segment was done. On histopathology, the diagnosis was confirmed as a splenunculi. Further confirmation was done by a normal PET Scan report.

Treatment in such cases is surgery. Excision can be done if it is small and not involving entire mesenteric width. However, in some cases resection and anastomosis of the bowel segment along with the splenunculi might be required. In present case as it was a huge lump with complete mesenteric involvent, hence resection was done.

Splenunculi has been documented as mimicking pancreatic neoplasm, renal cell carcinoma, adrenal mass, perotineal metastases, omental metastases, etc. However, splenunculi presenting as a large abdominal lump masquerading a mesenteric cyst, is a rare presentation.

Post operative course was uneventful and patient was discharged after histopathology report confirmed it as splenunculi and follow up for one year has been uneventful.

Conclusion

Splenunculi may present as a large intra abdominal lump mimicking a mesenteric cyst. Hence, in cases of large intra abdominal mobile lumps presenting as a mesenteric cyst, a possibility of large splenunculi shall be considered as a differential diagnosis.

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