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Rare Case of Hydatid Cyst of Spleen

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INTRODUCTION–

It is extremely uncommon to have primary hydatid disease of the spleen, and much more uncommon to produce pancreatitis as a consequence. Splenic hydatid cysts are typically secondary, meaning they develop after surgery involving hydatidosis in other areas or as a result of the cysts spreading spontaneously. Here, we describe a case of a primary isolated hydatid cyst in the spleen that was managed with traditional surgery.

CASE PRESENTATION -

34 year old male came to surgery opd with complaint of pain in left lumbar region since 2 months .

Pain was dull aching in nature , moderate in intensity , radiating to left side of back .

Not associated with nausea or vomiting . No comorbidities . No similar complaints in the past . No other complaints . No significant past history .

Patient is vitally stable . On per abdomen examination , a diffuse lump is palpable in left hypochondriac region extending to left lumbar region .

INVESTIGATIONS -

On radiological investigation , USG was suggestive of 9*8*7 cm (290 cc) heterogenous cystic lesion in left hypochondriac region , abutting medial border of spleen and tail of pancreas , the lesion shows no vascularity within , shows peripheral calcification .

OGDscopy shows normal study

CECT shows spleen is enlarged in size . A well defined hypodense cystic lesion noted arising from the splenic parenchyma in the region of superior pole . It shows peripheral rim of calcification and few foci of calcifications within .Measured 7*9*10 cm causing mass effect on greater curvature and fundus of stomach . Medially it is reaching upto the tail of pancreas . No evidence of thrombosis / compression .

Serum amylase and lipase are within normal limits

TREATEMENT –

Splenectomy done via a midline laparotomy incision

INTRAOPERATIVE FINDINGS –

1. 10*5 cm cyst over the upper pole of spleen
2. Dense adhesions around liver and diaphragm
3. Omental adhesions present

DISCUSSION –

The zoonotic infection known as hydatid disease (Echinococcosis) is brought on by the larval Echinococcus granulosus tapeworm parasite. Even though hydatid disease can affect any organ or soft tissue, it most commonly affects the liver (60–70%) and lungs (30%), with the kidney, spleen, bone, thyroid, breast, and pancreas being the rare exceptions. The clinical presentation differs depending on where the cyst is located anatomically. Although the majority of hydatid cysts are acquired in childhood, diagnosis is delayed by five to twenty years. The hydatid cyst continues to grow slowly but persistently.

Hydatid disease is a serious global health issue that mostly affects regions of the world that raise sheep and cattle. Spleen hydatid disease is an uncommon clinical disorder; even in the endemic region, the frequency of abdominal hydatid diseases is estimated to be 0.54–0.6%. The liver (60–70%) serves as

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the first filter in hydatid disease cases, and the lungs (10–40%) serve as the second filter. The spleen, thyroid, gall bladder, kidney, psoas sheet, retroperitoneal area, central nervous system, and orbit are among the uncommon sites. The hydatid illness can infect almost any organ. Because cyst embryos are held in the liver and lungs, barely 15% of them penetrate the systemic circulation, splenic involvement is an uncommon event.

By the artery route, 4 parasite eggs are able to pass past the liver-lung barrier and cause a primary splenic infestation. The retrograde transmission of parasites through the splenic and portal veins, avoiding the liver and lungs, can also result in splenic hydatid disease. After a ruptured hepatic hydatid cyst, systemic diffused or intraperitoneal dissemination is typically the cause of secondary splenic hydatid illness. Three layers comprise the hydatid cyst. Compressed splenic tissue, a middle layer of laminated friable ectocyst membrane, and an innermost endocyst germinal layer make up the outermost adventitia (pseudo cyst). There is a wide range in how splenic hydatid disease presents itself. The majority of splenic hydatid cysts are asymptomatic, solitary, slowly developing, and discovered by accident. The primary signs and symptoms of the illness include pain and discomfort in the abdomen . The main side effects of an untreated splenic hydatid cyst are inflammation, secondary infection, acute abdomen, compression of other viscera, intraabdominal rupture, and fistulization to the bowel, primarily the colon, which can cause severe pain and even be fatal. Pericystic inflammation can also result in adhesions with nearby organs, including the kidney, left diaphragm, colon, and stomach. A splenic hydatid cyst that ruptured into the left colon and caused severe gastrointestinal bleeding has been described . There have also been reports of splenic hydatid cyst rupture into the thorax, resulting in spleno-thoracic fistula. There have also been reports of severe anaphylactic reactions brought on by cyst rupture, which include fever, pruritus, dyspnea, stridor, and facial oedema. The removal of the splenic pulp from the body may cause hemolytic illness.

The splenic parenchyma may be completely replaced by the hydatid cyst if growth compresses the spleen's segmentary arteries, causing widespread pericystic splenic atrophy. Cystic splenic lesions, including splenic abscesses, epidermoid cysts, hematomas, and post-traumatic pseudo cyst neoplasms such as lymphangioma and haemangioma, constitute the primary differential diagnosis for splenic hydatidosis. Because the presenting symptoms and radiological findings resemble those of other more often encountered splenic lesions, preoperative diagnosis may be challenging. One possible result of a haematological study is eosinophilia.

Given the limited efficacy of drug therapy and owing to the risk of spontaneous or traumatic rupture, the surgical approach is still accepted as the standard for managing hydatid disease. The standard treatment is splenectomy (Hoffman, 1957) as Complete resection removes all parasitic and pericystic tissues.[5] During surgical treatment extreme caution must be taken to avoid rupture of the cyst.

During the surgical follow-up period, medical treatment is the cornerstone of care. Benzimidazole chemotherapy drugs are used in antihelminthic drug therapy. Albendazole 10–15 mg/kg/day for one month or Mebendazole 40–50 m/kg/day for three–six months is administered in addition to Praziquantel 40 mg/kg/wk for two weeks prior to and following surgery to lower the risk of anaphylactic shock and to relax the cyst wall. We removed the entire spleen. Following the splenectomy, prophylactic immunization against Neisseria meningitidis, Haemophilus influenza type B, and Streptococcus pneumoniae is given .

In conclusion, splenic hydatid disease presents a significant early diagnostic difficulty due to its rarity, particularly in nonendemic countries. When making a differential diagnosis for any cystic tumor in the spleen or abdomen, hydatid disease should be taken into account, particularly in areas where the condition is endemic. The splenic hydatid cyst could develop into a difficult surgical case. Preoperative assessment needs to be done with great care. A computerized tomography scan is the most diagnostically sensitive test available. Before surgery, the anatomical relationships of the splenic hydatid cyst should be demonstrated due to its variable presentations. The best curative technique is surgical resection, however each patient's therapy needs to be unique.

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