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Case Report

Life Threatening Anaphylaxis during the Aspiration of a Hydatid Cyst

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ABSTRACT:
A 65 year old male was admitted with symptoms of obstructive jaundice. On right upper quadrant ultrasound, a cystic mass was seen at the porta hepatis. The gall bladder and common bile duct weren't discernible. The intrahepatic biliary ducts were dilated and did not communicate with the cystic lesion. To clinch the final diagnosis, aspiration of the cyst was performed under ultrasound guidance. During the process, the patient went into anaphylactic shock and had to be resuscitated. Following aspiration of the cyst, there was a reduction in the size of the swelling. In a repeat ultrasound, the gall bladder was well visualized. Soon after, the patient's jaundice began to regress. Microscopic examination of the fluid confirmed the diagnosis. The patient has been prescribed Albendozole and was scheduled for surgery.

Keywords: Obstructive jaundice; Hydatid cyst; Dilated intrahepatic biliary radicals; Anaphylaxis

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1. INTRODUCTION

Hydatid Cyst is a parasitic disease mainly caused by Echinococcus granulosum. Hydatid Cysts are common in Mediterranean countries, the middle and far East, Europe, Asia, South America and Australia (1-2). In India, a few cases occur sporadically. While dogs are the primary hosts, human beings can act as an accidental intermediate host. The liver is the most common site with a wide spectrum of clinical presentations from being totally asymptomatic to causing severe jaundice. An enlarging cyst may compress the surrounding tissue, causing atrophy, fibrosis or obstruction, as in our case (3).

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2. CASE PRESENTATION

A 65 year-old male with a rural background presented with progressive abdominal swelling accompanied with pain and jaundice, which developed over a period of 3 months. On examination, his vital signs were within normal limits. Examination of the abdomen revealed an intra-abdominal mass measuring 4cm x 5cm in the epigastrium, which moved with respiration. The mass was firm with a smooth surface and rounded margins.

Routine investigation revealed a hemoglobin of 8.5 gm/dL, total leukocyte count of 16,900 c/mm, differential leukocyte count: neutrophils of 86%, lymphocytes of 9%, monocytes of 1% and eosinophils of 10%.

Figure 1. Right upper quadrant ultrasound showing the cyst

Ultrasound of the abdomen revealed a large cystic lesion at the porta hepatis measuring 13cm x 10cm in the right hypochondrium. Some echoes were seen within the mass. Since the gall bladder was not visualized separately, the differential diagnosis included a giant mucocele of the gall bladder, hepatic cyst or a hydatid cyst (Fig. 1).

CT scan of abdomen revealed intrahepatic biliary dilatation with obstruction at the porta hepatis due to a dilated, walled-off cystic lesion. Since the diagnosis was not clear, fine needle aspiration (FNA) was ordered. It was suggested that since the jaundice appeared to be due to pressure effects, if a reasonable amount of fluid could be drained during aspiration, it might have a therapeutic effect on the obstructive jaundice and buy some time to make the patient fit for surgery. We decided to use a thicker needle to perform the aspiration. Using aseptic precautions and ultrasonographic guidance, the needle was inserted. When about 100 ml was drained, the patient suddenly went into shock, from which the patient was immediately resuscitated. Though it may have been a mistake to use a thicker needle, the serum bilirubin

levels dropped from 24 to 16 mg/dl a single day after the FNA and the patient demonstrated marked clinical improvement. The diagnosis was established on examination of the aspirated fluid when hydatid membranes and scolices were found on microscopic examination. The patient was started on oral Albendazole and is awaiting surgery.

3. DISCUSSIONS

The diagnosis of hydatid cyst can be tricky because it is relatively uncommon and its highly variable signs and symptoms, as well as radiological and sonographic appearances. Eosinophilia may be the only finding on hematological investigation. Ultrasound is an important tool to diagnose hydatid cyst. Multivesicular cysts manifest as well-defined fluid collections in a honeycomb pattern with multiple septa representing the walls of the daughter cysts (4). Daughter cysts appear as cysts within cysts. Membranes may appear within the matrix as serpentine linear structures (Water Lily Sign). Though ultrasound is able to give a suggestive diagnosis in 80% of cases, it is not usually able to seal the diagnosis. CT scan and MRI can be used to establish a final diagnosis. The CT scan may display the same findings as an ultrasound; calcification of the cyst wall or internal septa is easily detected on CT. Another simpler method coming into prominent use is ultrasound-guided FNA (5). The criteria for diagnosis include hydatid membranes, protoscolices, scolices and hooklets on microscopic examination. Tareq Sinan et al. have performed FNA in 11 cases without any complications. In our case, the patient went into life-threatening anaphylaxis probably due to high pressure within the cyst, as was obvious due to severe obstructive symptoms.

4. CONCLUSION

Though ultrasound-guided FNA continues to be a very useful method to establish a conclusive diagnosis of hydatid cyst, one must always be prepared to deal with sudden and severe anaphylactic symptoms in case of an inadvertent leak.

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