An elderly male 55-year-old presented with history of dull aching pain in left hypochondrium since 2 years. The pain was intermittent in nature and radiated to left back. He was referred to the Department of Radiology for USG which revealed heterogenous mass in left suprarenal area closely abutting superior pole of spleen. It was followed by CECT examination performed with multislice scanner (GE Brivo 385- 16 slice scanner) with reconstruction in multiple planes. CT examination revealed a well defined soft tissue density lesion in left suprarenal region in close approximation with left dome of diaphragm closely abutting the spleen laterally. The lesion demonstrated thin smooth peripheral enhancement. The relationship of the lesion was better evaluated with reconstructed images in multiple planes [Table/Fig-1a,b,2a,b]. Since the lesion was thought be arising from diaphragm, a hypovascular diaphragmatic tumour was suspected. Differentials considered were benign tumour of diaphragm – fibroma, cystic lymphangioma. Splenic exophytic cyst was considered a rare possibility. Lack of experience with this unusual location of hydatid cyst failed us to include the possibility of hydatid cyst in the list of differential diagnosis. Retrospective examination of the images revealed a unilocular cystic lesion with subtle evidence of floating membranes and hyperdense contents within the lesion representative of turbid hydatid sand which could have clinched the diagnosis [Table/Fig-3a,b].

Imaging was followed by laparotomy and surgical excision. Intraoperative findings were that the lesion was adherent to posterior aspect of left hemidiaphragm and spleen. Double breasting of left hemidiaphragm was done following a roof top incision. A part of diaphragm adherent to mass was removed. During the section of the adherences between the cyst and the spleen and the diaphragm, the hydatid cyst began to separate from the spleen and remained attached to the diaphragm and clear cleavage plane was obtained from spleen [Table/Fig-4]. So, it was clear that the cyst originated from the diaphragmatic muscle. The lesion was found to be cystic with a small rent in the cyst wall. Followed by excision, the surgical site was irrigated with a combination of 40% povidone iodine and hypertonic saline. Postoperative histopathological examination confirmed the lesion to be a hydatid cyst [Table/Fig-5].

**DISCUSSION**

Hydatid disease, caused by the *Echinococcus granulosus* is a serious problem in which it is endemic like the Asian and Mediterranean countries due to close association with the primary hosts of the pathological agent, the dogs and the intermediate hosts.
In our patient this disease was purely diaphragmatic, without evidence of liver, lung or splenic involvement. The diagnosis of the diaphragmatic location is frequently incidental especially when the cyst is small and isolated. Large cysts on the other hand cause the symptoms related to the compression.

Preoperative diagnosis can be difficult in few cases especially in regions where the disease process is not endemic. A combination of clinical, laboratory and radiological findings helps in arriving at a preliminary diagnosis though organ of origin is not always possible with USG or CT. MRI is superior to CT in localisation as well as characterization of the cystic echinococcosis [6]. As in our case, the lesion was considered to be a primary diaphragmatic tumour prior to resection due to the various factors like lack of typical CT features, lack of awareness of this particular diagnostic entity and absence of subsequent MR Imaging. Retrospective evaluation of the CT images enabled us to identify subtle intracystic hyperdense membranes corresponding to floating membranes and hydatid sand which are consistent with the diagnosis of hydatid cyst.

Differential diagnoses include adrenal tumour, cystic lymphangioma and splenic exophytic hydatid cyst. Intraoperative findings and HPE confirmed the diagnosis as hydatid cyst.

Usually an isolated diaphragmatic hydatid cyst will be asymptomatic or result in a dull aching pain. However treatment is necessary to prevent secondary complications like rupture or infection. Complete resection can be achieved in case of small cystic lesions without any injury to diaphragm [7,8]. However, in large cysts, diaphragmatic reconstruction may be required with the use of prosthetic materials to prevent diaphragmatic hernia [8,9]. In our case, it was possible to perform a total cystectomy with minimal repair of the diaphragm.

**CONCLUSION**

Awareness of HD in the diaphragm is necessary to avoid erroneoous preoperative diagnosis and the possibility of hydatid disease should be considered in patients with preoperative cross sectional imaging indicating cystic lesions adjacent to the diaphragm, especially in endemic areas like India and if any of the specific imaging features such as calcification, daughter cysts and/or intracystic membranes are seen.

**REFERENCES**


