

Postoperative Recurrence of Huge Hydatid Cyst

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ABSTRACT

Background: hydatid disease (*Echinococcus granulosus*), is a parasite disease infestation in humans most commonly occurs in the liver. It has high recurrence rate. Surgery remains the mainstay of treatment for HD and aims to eliminate the parasite, promoting the rapid disappearance of any residual cavity and preventing complications and recurrence. **Case study:** our patient is a case of recurrent huge hydatid cyst which infested in the liver of 39-year-old female, medically free, in 2009 she underwent evacuation of hydatid cyst with partial removal of the cyst wall. 7 years later (2016) she presented to ER with abdominal mass increasing in size with time, associated with dull, aching pain and vomiting, with jaundice and itching, there was no fever, no change in bowel habit, no change in urine and stool color. A full investigation done, abdominal CT showed large oval shaped intraperitoneal cystic lesion with a diameter about 20 cm * 15 cm. The patient received anti-parasitic medications for 2 weeks before the operation. The operation of complete cyst excision (cystectomy) was done. We recommend a total or partial pericystectomy as the most appropriate procedure for the management of primary hydatid cyst and also for recurrent hydatid cyst with pre- and post-operative courses of anti-parasitic drugs should be considered which helped in reducing the intraoperative spillage of viable cysts and to decrease the recurrence rate post-operatively, and the patient has to avoid the risk factors and transmission ways of the parasite.

Keywords: Hydatid cyst, echinococcosis

BACKGROUND

Hydatid disease (*Echinococcus granulosus*) is endemic in the Middle East as well as other parts of the world, including India, Africa, South America, New Zealand, Australia, Turkey and Southern Europe¹⁻³. Infestation by hydatid disease in humans most commonly occurs in the liver (55—70%) followed by the lung (18—35%). Surgical management is the basic treatment for hydatid disease. Overall, the recurrence rate appears to be high (4.6%—22.0%). Both host and parasite factors determine recurrence, Certain technical problems increase the chance of inadvertent operative rupture and spillage of cyst contents. The purpose of this study was to report our results in the management of recurrent hydatid disease³.

Case Report

39 years old female patient with PSH of evacuation of hydatid cyst with partial removal of the cyst wall on 2009.

The patient presented to ER complains of abdominal mass at epigastric region with gradual increase in size for 9 months' duration, associated with dull aching pain and vomiting, with no fever, no bleeding, no change in bowel habit, no change in urine or stool color. there is history of loss of weight, jaundice and itching.

- No history of cough or contact with T.B patient.
- No history of contact with hepatitis patient.
- Other systemic review unremarkable
- PMH medically free

Family history no similar episode, no DM, no HTN.etc.

Social married house wife with 4 kids, live in south region of Saudi Arabia (sharorah) low income, they own sheep farm which the wife usually take care of them.

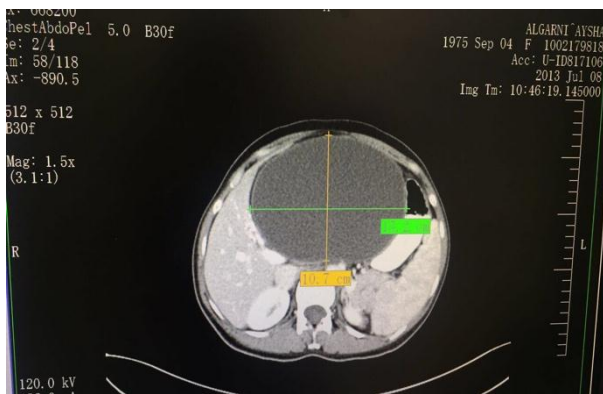
On examination the patient was conscious, oriented, underweight, not in distress no jaundice, vitally stable.

Abdominal examination revealed subcostal scar with upper midline extension, soft lax abdomen with huge intra-abdominal swelling measures 20*12cm .

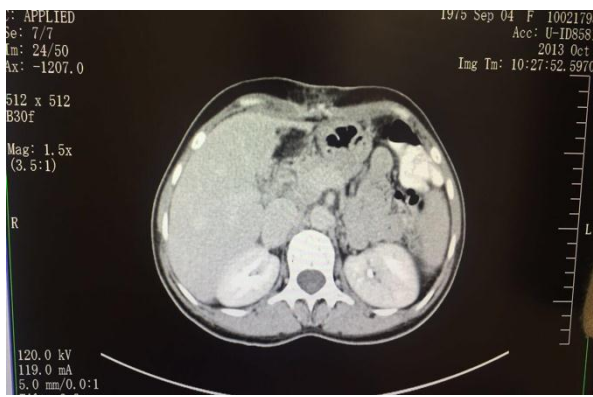
All labs work were within normal range.

CT done at 8/7/2013 showed large oval shaped intraperitoneal cystic lesion measuring about 20cm * 15cm, pushing the liver and the stomach laterally and is in contact with the pancreas, pushing the abdominal wall anteriorly. this lesion showing no vegetation, loculation or enhancement after contrast injection. This is highly suggestive of hydatid cyst. (Figures 1a, b, c)

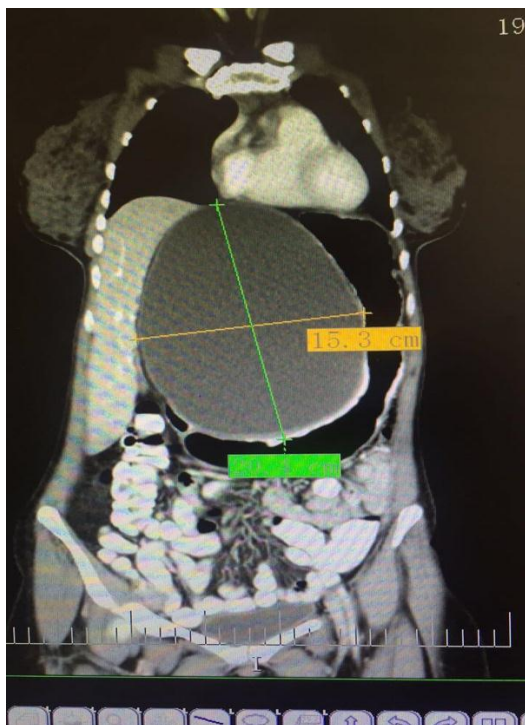
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(Figure 1a)



(Figures 1b)



(Figure 1c)



Figures 2



Figures 3

The patient received antiparasitic medications (albendazole 400mg BID PO, praziquantel 600mg BID PO) 2 weeks before the operation. Operation of complete cyst excision (cystectomy) was done at 24/9/2013. Which was ovoid shaped cyst measuring 21 * 15 * 9 cm. external surface is shaggy and focally hemorrhagic. On opening the cyst

On 2006 the patient admitted through ER with a huge epigastric mass that investigated and found to be hydatid cyst rapidly growing throughout two weeks. The CT showed that the cyst was compressing the pancreas, on the

contain clear fluid and loose inner whitish membrane.

Microscopically the cyst wall shows a fibrotic capsule heavily infiltrated by eosinophils and chronic inflammatory cell surrounding an external incomplete chitinous layer and inner germinal layer. Daughter cysts are present, however no viable scolices are identified (figure 2,3) main portal vein. For that reasons, the evacuation of the cyst was done without total resection. The cyst was measuring 18 *15 * 1,3 cm.

DISCUSSION

In spite of modern therapeutic methods, recurrent hydatid cyst remains a significant problem for surgeons in endemic regions. A history of hydatid disease as well as the presence of its characteristic cystic lesions may well suggest the diagnosis of recurrent hydatid cyst, but it is often difficult to establish the unequivocal diagnosis before surgery.

Although recurring cysts are commonly known to affect the liver and lung, studies also show that they can also affect other organs. Pre-operative diagnosis of RHC may be difficult, because it may be confused with primer or postoperative cysts (biloma, lymphocele). In our study, RHC was successfully diagnosed pre-operatively. Another clinical scenario involves a cyst resulting secondarily to the surgical technique via disseminated vesicles intra operatively. In our study, we encountered RHC most likely due to the dissemination from the previous surgery or due to patient negligent by contact with dogs and sheep and didn't receive ant parasitic medication.

There are several different strategies that are currently being used to prevent and control cystic echinococcosis. Most of these various methods try to prevent and control cystic echinococcosis by targeting the major risk factors for the disease and the way it is transmitted. For instance, health education programs focused on cystic echinococcosis and its agents, and improved water sanitation attempt to target poor education and poor drinking water sources, which are both risk factors for contracting echinococcosis. Furthermore, since humans often come into contact with *Echinococcus* eggs via touching contaminated soil, animal feces and animal hair, another prevention strategy is improved hygiene. In addition to targeting risk factors and transmission, control and prevention strategies of cystic echinococcosis also aim at intervening at certain points of the parasite's life cycle, in particular, the infection of hosts (i.e. especially dogs) that reside with or near humans. For example, many countries endemic to echinococcosis have implemented programs geared at de-worming dogs and vaccinating dogs and other livestock, such as sheep, that also act as hosts for *E. granulosus*.

CONCLUSION

Surgical RHC failures may result in a new cyst(s) at a different location or in an undiscovered cyst(s) in a previous location.

the rigorous evaluation of the patient is important for the improved diagnosis. An early diagnosis and the detection of small cysts are especially important – because if cysts can be detected and controlled at an early stage, they pose little or no threat pathologically or functionally to organs.

Additionally, the proper perioperative evaluation and patients' support are efficacious in improving surgical results. We recommend a total or partial pericystectomy as the most appropriate procedure for the management of primary HC and also for RHC with pre- and post-operative 1-month courses of anti-parasitic drugs should be considered in order to reduce the spillage of viable cysts during the surgery and to decrease the recurrence rate post-operatively.

Furthermore, we advocate RHC incidence may be decreased with the improvement of misdiagnoses, mistreatment, and appropriate follow-up and also the preventive immunologic research in the biology of the parasite.

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