

Conservative Management of a Hydatid Cyst During Pregnancy

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Abstract: Hydatid disease is a global parasitic zoonosis with a very low incidence of 1 in 30,000 during pregnancy, with liver as the main organ to occur in it. Their diagnosis would depend on their clinical or radiological presentation, but the main problem during pregnancy would be their management. Here in, we present our case of accidentally discovered liver hydatid cyst during pregnancy that was managed by albendazole therapy.

Keywords: Liver hydatosis, pregnancy, asymptomatic.

INTRODUCTION

Echinococcosis or hydatid disease is a disease caused by the larval phase of the canine tapeworm *Echinococcus granulosus* or *Echinococcus multilocularis* in different animal species especially dogs. In humans, they are transferred by ingestion of nourishment polluted by eggs discharged by the complete host (e.g.; after handling dogs) or from consuming contaminated food or water. The larval of the tapeworm could be found at different body sites where it forms a fluid – filled sac known as a hydatid cyst. The cysts contain immature forms of the tapeworm and can grow over a period of time by 5 to 10 cm or more. Hydatid disease can remain asymptomatic for a long time and can be found accidentally during performing an ultrasound.

Hydatid cyst is rarely reported during pregnancy and there is no common agreement over the protocol of treatment.

We present a case of Hydatid liver cyst that was discovered accidentally during the regular ultrasound follow-up during pregnancy that was treated successfully with albendazole.

CASE REPORT

During the regular ultrasound follow-up for 33 years old multiparous 14 week's asymptomatic pregnant woman, two hepatic daughter cysts were discovered. The patient denied any recent travel to endemic areas or recent color changes in her color skin, urine, or stool.

Her physical examination was unremarkable for a pregnant woman and the laboratory work up showed anemia: Hemoglobin =10.5 g/dl, white blood cell count of 7,800; serum alanine aminotransferase (ALT) of 22 U/l; serum aspartate aminotransferase (AST) of 34 U/l; with normal serum bilirubin and negative viral markers.

A confirmatory ultrasonography on the abdomen 3 weeks later showed a gravid uterus of 16-week size appeared and 2 similar hepatic daughter cysts measuring 2 × 3×1.5 cm3 in the VI liver segment of the right lobe showing a cystic membranes, septa, and

Hydatid sand. Echinococcal serology (IgG) was performed using the ELISA method which was positive.

Albendazole 400 mg twice daily was administered for 2 weeks that was discontinued for 2 weeks with reported a decrease in the size of cysts, was demonstrated in repeated scans. Then finally repeated for another 2 weeks later. During that period, she received routine antenatal care.

At 39 weeks, pregnancy was concluded by a normal vaginal delivery with administration of both Albendazole and corticosteroid to avoid anaphylactic shock; and a healthy male baby, with a birth weight of 2600 g. Placenta did not reveal any abnormality on gross as well as on histopathology examination.

A CT Scan done 2 months post-partum showed resolution of the liver hydatid cyst. After 4 months follow-up, the Patient was doing fine with unremarkable findings.

DISCUSSION

Hydatidosis is considered one of the most important zoonotic diseases and is important for public health due to diagnostic difficulties. Hippocrates

described the human Echinococcus disease more than 2,000 years ago with the term "water - filled liver". Al-Rahzes, the famous Arab doctor, wrote about 1,000 years ago on hydatid liver cyst [1].

Domestic animals serve as intermediate hosts and the main human disease reservoir. The adult Echinococcus granulosus is 5 mm long and consists of an egg-containing scolex (head) and a proglotid (2-3) [2]. These proglotids are passed on to humans from the ingestion of canine feces contaminated food. Man is an intermediary host for Echinococcus when dogs, foxes and wolves are present. Echinococcus taeniid-worm has a two-host life cycle in which canines serve as final hosts, while domestic livestock and wild ungulates act as intermediate hosts [3].

Careful diagnosis of hydatidosis in livestock is essential for the identification of the most important source of the spread of the disease in Saudi Arabia. One of the most recent reports were from Abdel-Azeem S *et al.*, [4] whom reported an overall prevalence of 2.33%. The highest prevalence was recorded in winter (6.48%) while the lowest was encountered in summer (1.36%). Females were proved to be more prone to infection (70.7%) than males (29.3%). In the present study, younger sheep tended to have a higher prevalence of infection than older ones. The most commonly infected organ was the liver, with a prevalence of 81.5%. The recorded cysts showed a fertility rate of 75.4%, and a high viability rate of 61.2%. Hepatic cysts were the most fertile and viable ones (46%), while calcified cysts were not recorded during the study.

Hydatid disease is often asymptomatic. Symptoms may occur because of the compression on the gravid uterus. Complications due to hydatid disease arise because of a) rupture, b) compression of adjacent structures, or c) infection of the cyst. To date, there is no consensus on the management of complicated pregnancies with this zoonosis. Medical therapy includes oral albendazole. Albendazole response depends on the thickness of the cyst wall and the lack of calcification. It cannot, however, be used during the first trimester because of the risk of teratogenicity. Although echinococcus cyst of the liver can be treated medically, Robertson M [5] reported mother death 3 days postpartum due to an unusual devastating complication of the hydatid cyst.

For that reason, medical or surgical treatment should be offered for even asymptomatic pregnant

patients to avoid devastating outcomes that in some situations; the cyst may enlarge to cause obstruction of labor [6]. Hydatid disease diagnosis requires a high level of suspicion. In our case scenario, a 14 weeks pregnant lady was diagnosed with liver hydatosis and successfully managed by medical treatment only with oral albendazole. Surgery may be preserved for large sized, symptomating or obstructing cysts.

Albendazole is preferred over mebendazole because of better absorption with a dose of albendazole is 10 mg/kg twice daily with meals. The reported adverse effects include headache, nausea, anorexia, vomiting, abdominal pain, and itching.

CONCLUSION

In conclusion, hydatid disease of the liver should suspect in cases with liver cysts during pregnancy, especially in a patient residing in endemic areas. Successful management with albendazole in asymptomatic patients should be a main option for patients understanding the possibility of drug teratogenicity.

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