

CASE REPORT

Abdominal and pelvic hydatid cyst obstructing the labor

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Abstract: Hydatid cystic disease is a parasitic disease primarily infesting the sheep and cattle. It is a rare condition in pregnancy with an incidence of 1/20000 pregnancies. An eighteen-year-old primigravida was evaluated due to obstructed labor. Multiple abdominal and pelvic hydatid cysts were diagnosed by ultrasonography and a healthy infant with birthweight of 3330 g was delivered by cesarean section. While the cysts situated on the posterior uterine wall, paraovarian region and omentum were removed totally, the hepatic cysts were only partially removed and then drained. The hydatid disease should be considered in differential diagnosis of adnexal masses obstructing the labor in pregnancy (Fig. 3, Ref. 9). Full Text in free PDF www.bmj.sk.

Key words: hydatid cyst, pregnancy, pelvis, abdomen, labor.

Hydatid cystic disease is an infestation of sheep and cattle caused by the larval form of *Echinococcus granulosus* after being excreted by canine definitive hosts. Affected human beings are accidental hosts who have ingested food contaminated with eggs of the parasite. It is a common and severe health problem in some Mediterranean countries such as Turkey, Greece and Tunisia, as well as in Middle East countries (1). The incidence of hydatid disease in pregnancy is very rare, ranging from 1/20000 to 1/30000 (2). Hydatid cysts can occur in any part of the body but the most common locations are in the liver and lungs. Cysts in the peritoneal cavity and ovaries have been less often reported (1 % or less for each location) (3). Pelvic hydatid disease has various obstetric and gynecologic presentations. There are only few reports of obstructed labor caused by pelvic hydatid cysts (4, 5).

We report a case of a primigravida with multiple abdominal and pelvic cysts. The patient was admitted to our hospital in her 37th week of gestation. In this case, a cystic mass of 9 cm in diameter occupied the Douglas. Because of its size, it bulged into the posterior fornix and thus obstructed the labor.

Case

An eighteen-year-old primigravida was admitted to our hospital with spontaneous labor in her 37th week of gestation. She did not undergo any examination during her pregnancy. At the

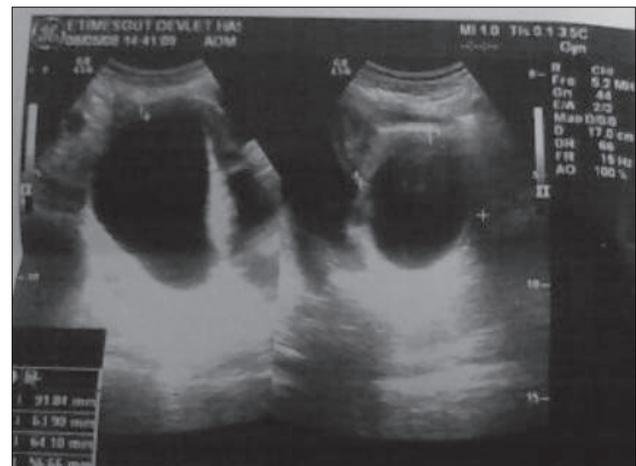


Fig. 1. Cervical cyst obstructing labor.

time of admission, the cervical dilatation was 3 cm and the pouch was intact. Pelvic examination revealed a dense cystic mass of 90 mm in diameter occupying the Douglas and bulging into the posterior fornix. Even after the amniotomy, fetal presentation did not occur because of the cystic mass. The ultrasonographic examination revealed a uniloculated anechoic cystic mass of 92x80x75 mm on the posterior uterine wall, a cyst of 71x64x53 mm in diameter in the left paraovarian region and further anechoic cysts, namely hepatic cysts of 40x53 mm and 52x50 mm, paraaortic cyst of 91x54 mm and omental cysts of 88x50 mm and 57x50 mm in diameter (Figs 1 and 2). The patient had no previous history of hydatid cyst disease. Cesarean section was performed due to the large mass obstructing the labor.

A healthy infant with birth weight of 3330 g was delivered by cesarean section. During the operation, multiple cystic masses were determined. The entire omentum contained multiple cysts with diameters ranging from 4-6 cm. Another cyst of 7 cm in

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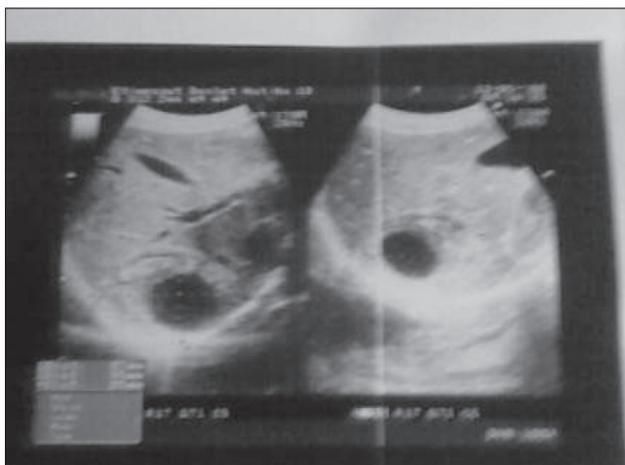


Fig. 2. Ultrasonographic appearance of hepatic cysts.



Fig. 3. Macroscopic appearance of cysts.

diameter was discovered in the left paraovarian region. A large tender cystic mass of approximately 9 cm in diameter was observed to occupy the Douglas and bulge into the posterior uterine wall near the cervix. The latter cysts were removed. In addition, two hydatid cysts, each of 5 cm in diameter were found upon palpation on the anterior side of right hepatic lobe, as well as cystic masses of approximately 10x15 cm in the left paraaortic and retroperitoneal regions. The operation field was isolated by

packs soaked in 10 % polyvinylpyrrolidone-iodine solution and the same solution was used as a scolicidal agent to irrigate the cyst cavity in the hepatic lobe. Also inside the cavity, a suction drain was left. The procedure was completed by closing the abdominal incision. When we opened the cysts after their surgical removal, crystal clear liquid and daughter cysts were seen. Surgically enucleated cysts were taken for pathologic evaluation (Fig. 3). The diagnosis of hydatid disease was also confirmed by an indirect hemagglutination test.

No complications occurred after the operation and the suction drain was removed on the fifth postoperative day. In order to find out whether any other hydatid cysts occur in the body, a computed tomography scan of the chest and cranium was performed. On the sixth postoperative day, the patient was discharged and albendazole was prescribed for three months in an oral dose of 10 mg/kg/day. The mother was advised not to breastfeed her infant.

Discussion

The hydatid cystic disease is very rare during pregnancy (2). Nevertheless, the latter diagnosis in pregnancy is even more important because a decrease in cellular immunity during pregnancy may cause a rapid increase in the parasitic growth resulting in enlargement of cysts and development of symptoms (6).

Torsion or rupture of cysts, pelvic inflammation and anaphylaxis are frequent complications of the disease and in less than 5 % of cases, it is complicated by malignancy (8). Obstetric problems complicating the human hydatid disease are abdominal pain, dystocia, obstruction of labor and uterine rupture (2). Anaphylactic shock may occur when cysts rupture during the second stage of labor. Because of this, some authors advise cesarean delivery while there are others who prefer vaginal delivery (6). Obstetricians must determine the route of the delivery carefully. In this case, the uterine cystic mass led to obstruction of labor, and cesarean section was chosen in order to prevent obstetric complications.

Ultrasonographic examination is the gold standard in the diagnosis of hydatid cyst during pregnancy because it shows the pregnancy status and reveals the number and locations of cysts as well as their relationship with other intraabdominal organs and pelvic structures (9). Serological tests are less reliable in pregnancy because of the usual immunological change (2).

The management of hydatid disease during pregnancy is a problem due to the lack of safe management and treatment protocols. Surgical therapy is the main treatment but its performance during pregnancy may be difficult. Moreover, the timing of surgery is still controversial. Drugs such as albendazole and mebendazole have shown to be embryotoxic and teratogenic for animals and the safety of these drugs has not yet been proved. These drugs can be used in the second and third trimesters if treatment is necessary. Percutaneous treatment can be applied in selected cases (1).

In conclusion, physicians working in endemic areas as e.g. in our country, Turkey, must be aware of the possibility of the

occurrence of hydatid disease especially during pregnancy since hydatid cysts may cause severe complications and be fatal for both, mother and baby. The most important factor controlling the disease is the primary prevention. Hydatid disease should be considered in differential diagnosis of adnexal masses in pregnancy. Morbidity due to surgical treatment during pregnancy is very low and there are no reports of mortality.

References

1. **Ustunoz B, Alemdaroglu A, Bulakbasi N et al.** Percutaneous treatment of hepatic hydatid cyst in pregnancy. *Arch Gynecol Obstet* 1999; 262: 181–184.
2. **Rahman MS, Rahman J, Lysikiewicz A.** Obstetrical and gynecological presentations of hydatid disease. *Br J Obstet Gyneaeol* 1982; 89: 665–670.
3. **Mc Manus DP, Zhang W, Li J, Bartley PB.** Eccinococcosis. *Lancet* 2003; 362: 1295–1304.
4. **Jasper P, Peedicayil A, Nair S et al.** Hydatid cyst obstructing labor: A case report. *J Trop Med Hyg* 1989; 92: 393–395.
5. **Zorlu CG, Isyk AZ, Caglar T.** Primary pelvic eccinococcosis in pregnancy. *Int Gynecol Obstet* 1996; 52: 177–178.
6. **Can D, Oztekin O, Oztekin O et al.** Hepatic and splenic cyst during pregnancy. *Arch Gynecol Obstet*, 2003; 268: 239–240.
7. **Dede S, Dede H, Calyskan E, Demir B.** Recurren pelvic hydatid cyst obstructing labor, with a concomitant hepatic primary: A case report. *J Reprod Med* 2002; 47: 164–166.
8. **Jackish C, Schwenkhagen A, Louwen F, Raber G, Oehme A, Schneider HP.** Eccinococcus in pregnancy. A rare differential diagnosis in cystic intraabdominal tumors in pregnancy. *Zbl Gynecol* 1997; 115 (6): 263–272.
9. **Monterola C, Espinoza R, Munoz S et al.** Abdominal eccinococcosis during pregnancy. a clinical aspects and management of series of cases in Chile. *Tropic Doctor* 2004; 34: 321–323.

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