

Hepatic Hydatid Cyst During Pregnancy: Case Report

Gebelik Sırasında Hepatik Kist Hidatik

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ABSTRACT A parasitic pathology hydatid disease is rare in pregnancy with a reported incidence of 1/20.000. Since the condition is rarely encountered in pregnancy, there are no standard guidelines available for its treatment. We present a case of 22-year-old, primigravida in the 24th week of her gestation, in whom hepatic hydatid cyst was diagnosed by ultrasonography. After weekly follow-up to 39 week of her gestation, an emergency cesarean section under spinal anesthesia for fetal distress was performed and patient had surgery in the postpartum period. The importance of our case is only expectant management was preferred, unlike previous reports in the literature.

Key Words: Echinococcus; echinococcosis, hepatic; pregnancy

ÖZET Kist hidatik, gebelik sırasında insidansı 1/20.000 olarak bildirilmiş parazitik bir patolojidir. Gebelikte nadiren karşılaşılanın yanısıra, tedavisi konusunda herhangi bir konsensus yoktur. Bu yazımızda 22 yaşında, gebeliğinin 24. haftasında, ultrason ile hepatic hidatik kist tanısı konan primigravid hasta, vaka olarak sunulmaktadır. Gebeliğinin 39. haftasına kadar haftalık takip edilen, fetal distress endikasyonu ile spiral anestezi altında acil sezaryen ile gebeliği sonlandırılan hasta, postpartum dönemde opere edildi. Bu vakanın önemi, literatürde paylaşılan diğer vakalardan farklı olarak gebelikte müdahale yapılmamasıdır.

Anahtar Kelimeler: Ekinokok; ekinokokkozis, hepatic; gebelik

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Hepatic hydatid cyst is a zoonotic infection caused by *Echinococcus granulosus*. Infection by this organism resulting in hydatid disease is endemic in Turkey, as well as in the sheep-producing regions of southern Europe, Asia, Australia, Africa, Argentina and the Middle East.¹⁻³ In obstetrics, hydatid cysts are rare with a reported incidence of 1 in 20.000 to 1 in 30.000.^{4,5} Hydatid disease has been expected to be more symptomatic during pregnancy. However, the presentation may vary from asymptomatic disease to acute complications like cyst rupture, anaphylaxis and obstruction of labor. Because the condition is rarely seen in pregnancy, there is no standard recommendations, available for its treatment.

CASE REPORT

A 22-year-old, primigravida was seen at maternity unit of our hospital in the 24th week of her gestation, because she complained recurrent vomiting

and right upper abdominal pain of 5 days. She had lived in rural areas in Turkey during her childhood. Abdominal examination revealed soft hepatomegaly 2 cm below the costal margin in the midclavicular line, soft in consistency, tender with smooth surface. The remainder of the examination was normal. Ultrasound imaging showed a large cystic mass arising from the liver measuring 11x9 cm with no internal echoes (Figure 1).

Due to presence of daughter cysts based on ultrasound findings, percutaneous drainage was not considered as an option. The risks and benefits of other management options including surgical removal of the cyst, medical treatment with albendazole and expectant management were discussed with the patient. She declined surgery and drug therapy.

After weekly follow-up to 39 week of her gestation, an emergency cesarean section under spinal anesthesia for fetal distress was performed without any complication. The patient delivered a 5370 g, mature boy at 39 weeks. A week after delivery, computerized tomography confirmed a 12x10 cm hydatid cyst with internal daughter cysts. Patient referred to general surgery department and received 10 mg/kg/day of albendazole for 4 days prior to the surgery. Follow-up 6 weeks after delivery was uneventful.



FIGURE 1: Ultrasound imaging showed a large cystic mass arising from the liver measuring 11x9 cm.

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

DISCUSSION

Hydatid cyst is a parasitic disease, caused by a kind of cestod, *Echinococcus*. Although the disease is seen in particular regions of the world, its incidence probably increasing because of immigration from endemic countries.

During pregnancy, progression of the disease is rapid. It is suggested that decreased cell-mediated immunity during pregnancy may facilitate *echinococcus* growth.⁶

Epidemiological information of the patient, may help making the diagnosis. Physicians should consider hydatid cyst as a diagnosis for patients who lived or have been living in rural areas and have clinical picture of the disease. Nevertheless, the diagnosis is usually made by ultrasound. Serological tests are used for confirmation. In the present case, patient had symptoms such as recurrent vomiting and right upper abdominal pain. After the lesion was identified by ultrasound, history of the patient was taken by another doctor again and led us to the diagnosis. We didn't use serological tests, since indirect haemagglutination test and complement fixation test are not available in our hospital and the patient didn't want to go to another hospital.

Surgery continues to be mainstay management of cystic hydatid disease. The timing of surgery is questionable. Even though the optimal time of operation is second trimester because of lower risk of spontaneous abortion, first trimester surgery may be done, in the presence of acute symptoms.¹ Nevertheless, surgery may be difficult in pregnancy and medical treatment, mebendazole or albendazole, are proposed except first trimester of pregnancy.⁷ Percutaneous treatment of hydatid cyst is a non-invasive, easily applicable, well tolerable and effective method compared with conventional surgical treatment.⁸ For pregnant, hydatid cyst

was treated by percutaneous drainage successfully.⁹ There is an obstacle for percutaneous cyst aspiration: 'presence of daughter cysts'. In our patient, there was an ultrasound image of daughter cyst in the liver. So, percutaneous drainage is not recommended. Other treatment options were discussed with the patient but she declined all.

The route and the timing of delivery are controversial. Some authors advise cesarean delivery while others prefer vaginal delivery. Current strategies are based on results obtained from case reports. Three patients delivered term, healthy infants vaginally, one had surgery in the first trimester, one in the second trimester, other had percutaneous drainage in the second trimester.^{1,9,10} However, another patient, who had surgery in the second trimester, delivered a preterm infant in the 33rd week of pregnancy.⁷ Two patients, treated with only oral Albendazole, underwent elective cesarean delivery, one in 34th, other in 38th week of pregnancy.^{11,12}

In our case, an emergency cesarean section under spinal anesthesia for fetal distress was performed. Although there weren't any risk factors for macrosomia (such as gestational diabetes mellitus, maternal obesity), the patient delivered 5370 g male baby. In previous cases, no macrosomia has been reported, so it is suggested that it may be just a coincidence.

The importance of our case is only expectant management was preferred, unlike the cases mentioned above. Surgery during pregnancy may be associated with increased intraoperative morbidity because of the gravid uterus and may elevate the risks of miscarriage and preterm labor. Although the cyst may increase in size, due to risks mentioned above, surgical excision can be delayed to postpartum period or performed simultaneously at the time of caesarean delivery.

Albendazole has been used in treatment of liver hydatid cyst to prevent recurrence. Its use is recommended preoperatively. For patients not suitable for surgery or reject surgery, it may be used alone after the first trimester of pregnancy without teratogenic effects, and may eradicate echinococcus but may not alter cyst size. In a case, which only albendazole is used, one underwent elective cesarean delivery because of cyst enlargement 34th week of pregnancy.¹¹

In conclusion, management should be individualised. There is no clear recommendation for treatment of hepatic hydatid cyst in pregnancy. Physicians must provide patients with all the information they need to make their decisions. Patients understand the treatment options, including advantages and disadvantages of medical management with albendazole, surgical excision in the second trimester or expectant management.

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