

CASE REPORT

# Primary Subcutaneous Hydatid Cyst at the Flank: A Case Report

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## ABSTRACT

*Primary subcutaneous hydatid cyst is a very rare condition even in endemic areas. This study aimed to present a preoperatively diagnosed hydatid cyst in the subcutaneous tissue in a rare location. A 62-year-old female presented with a right lumbar 4-cm mass, covered with normal skin, painless, mobile, and Fluctuant is the right one, which was suspected as hydatid disease. Our high degree of suspicion was based on our previous experiences in our endemic region. Ultrasound revealed a type II hydatid cyst and serology supported the preoperative diagnosis. The mass was excised totally under local anesthesia with the surrounding fibrous tissue without contamination. Macroscopic and histopathological examinations confirmed the diagnosis. Preoperative diagnosis of subcutaneous hydatid cysts allows the surgeons to take preventive measures against surgical site contamination.*

**Key words:** Hydatid cyst, Subcutaneous tissue, Rare location

## ÖZET

### Primer Lomber Cilt Altı Kist Hidatiği: Olgu Sunumu

*Primer cilt altı kist hidatiği endemik bölgelerde bile az görülen bir durumdur. Bu çalışmada preoperatif tanısı koyulan nadir yerleşimli bir cilt altı kist hidatik olgusu sunmayı amaçladık. Sağ lomber bölgede şişlik şikayeti ile başvuran 62 yaşındaki kadın hastanın muayenesinde üzeri normal deri ile kaplı, mobil, ağrısız, fluktuan 4 cm'lik kitle tespit edildi. Endemik bölgede olmamız nedeniyle ve daha önceki benzer tecrübelerimize dayanarak olgunun bir cilt altı kist hidatiği olabileceği düşünüldü. Ultrasonografinin tip II kist hidatik olarak rapor etmesi ve seroloji pozitifliği preoperatif tanıyı destekledi. Kitle lokal anestezi altında çevre kontaminasyonu olmadan çevresindeki fibröz doku ile birlikte total olarak eksize edildi. Makroskopik ve histopatolojik inceleme kist hidatik tanısını doğruladı. Cilt altı kist hidatik tanısının preoperatif koyulabilmesi cerrahi esnasında kontaminasyon açısından gerekli tedbirlerin almasına olanak sağlamıştır.*

**Anahtar kelimeler:** Kist hidatik, Cilt altı doku, Nadir yerleşim

## INTRODUCTION

Hydatid cyst, a parasitic disease characterized by cystic lesions, is created by *Echinococcus granulosus* or rarely by *Echinococcus alveolaris*. While dog is the main host for *E. granulosus*, sheep, goats, cattle, and sometimes humans are intermediate hosts<sup>[1]</sup>. Hydatid disease is endemic in the Middle East, Central Europe, Australia, and South America. In those areas, hydatid disease is often a major health problem because of the relationship between the livestock and dogs. Liver (75%) and lungs (15%) are the frequently involved organs. Although other locations in the body are rare, embryos can form the disease in any region of the human body, if they pass the hepatic veins in the liver<sup>[2]</sup>. Primary subcutaneous hydatid cyst is a very rare condition even in endemic areas<sup>[3-5]</sup>. This study aimed to present a case of primary hydatid cyst in the subcutaneous tissue of the right lumbar region.

## CASE REPORT

A 62-year-old female patient was hospitalized because of swelling in the right lumbar region (Figure 1). The patient had no complaints other than swelling. Physical examination revealed a 4 x 3 cm mass, which was covered with normal skin, painless, mobile, and fluctuant. Sonographically, there was a cystic lesion including a thick wall, detached internal membrane and linear septations, and the cystic lesion was reported as a hydatid cyst type II of Gharbi classification. The indirect hemagglutination (IHA) test was performed and was positive (1/2048). No other abnormality was found on the routine blood tests. There was no evidence of hydatid cyst in the other system scans. After the preoperative diagnosis of hydatid



Figure 1. Right lumbar mass.

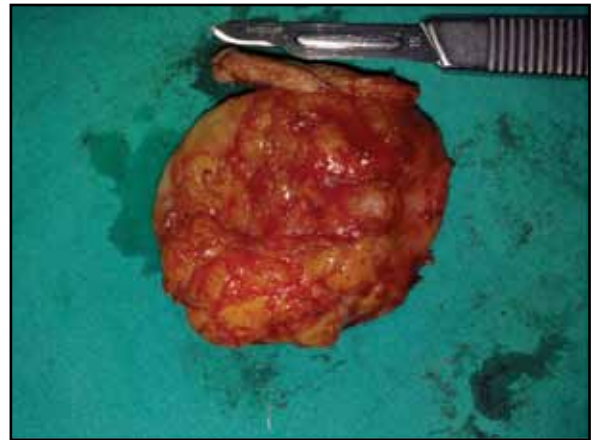


Figure 2. Total excision of the cyst.



Figure 3. Laminar membrane of the hydatid cyst.

cyst, the mass was excised totally under local anesthesia with the surrounding fibrous tissue (Figure 2). Macroscopic examination of the cystic mass showed hydatid fluid and laminar membrane (Figure 3). During the process, there was no contamination of the surrounding tissues. Albendazole was not ordered before or after surgery. Diagnosis of hydatid cyst was confirmed with histopathology, and no local or systemic recurrence was observed in the one-year follow-up.

## DISCUSSION

Subcutaneous hydatid cysts may be primary or secondary. Secondary hydatid cyst has a primary focus of disease or a history of operation. The reported incidence of subcutaneous hydatid cyst is 2% of all the hydatid cases, but this includes both primary and secondary cysts. The incidence of primary subcutane-

ous hydatid cyst should actually be lower. Our case had no history of hydatid cyst or another hydatid focus and was accepted as a primary subcutaneous hydatid cyst disease.

Preoperative diagnosis is important because of the risk of cyst rupture during the treatment. Contamination of surrounding tissues with the cyst contents can result in problems such as local recurrence or anaphylaxis. Preoperative diagnosis in patients living outside endemic areas is difficult. Our country is endemic for *E. granulosus* and because of our previous experiences, a preoperative diagnosis was achieved. The cyst and the fibrous tissue around the cyst were removed without rupture or contamination.

Diagnosis is usually based on the findings on ultrasound and computed tomography in suspected cases who live in endemic areas or have a history of travel to endemic regions<sup>[6]</sup>. Ultrasound demonstrates the size, location and type of the cyst. Sensitivity of ultrasound is almost 95% and reaches 100% if there are vesicles. Computed tomography can be necessary for suspected cases or before surgery to show the relationship with the neighboring organs<sup>[7]</sup>. In our case, the diagnosis was made according to ultrasound images. Serology is an important tool in the diagnosis of hydatid cyst. IHA test positivity is over 80% for liver cysts but the false negativity of the test can be high for locations outside the liver<sup>[1]</sup>. Thus, if the test is negative, this does not rule out hydatid disease. If the test is positive, as in our case, this is a good evidence for the presence of the disease. The best treatment option is total removal of the cyst without rupture or contamination. If there is a contamination to surrounding tissues, after removal of cyst contents, the cyst pouch should be irrigated with protoscolicidal solutions<sup>[8]</sup>. These irrigations were not required in the presented case because of successful complete total excision.

In conclusion, hydatid cyst should be kept in mind in the differential diagnosis of cystic masses, even in rare sites.

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