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# PRIMARY SUBCUTANEOUS HYDATID CYST

## Case Report

# PRİMER SUBKUTAN KİST HİDATİK

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**ABSTRACT**

A 52-year-old male presented with a swelling in the left chest wall since three years which was gradually increasing in size. The patient underwent surgery for excision of the cyst. Histopathological examination revealed a hydatid cyst. There was no local or systemic hydatic cyst was during the two-year follow-up period. In the absence of hepatic and pulmonary involvement, hydatid disease of other organs is extremely rare. In this paper, we report on a patient who had a primary subcutaneous hydatid cyst in the left chest wall.

**Key Words:** *Hydatid cyst; subcutaneous cyst hydatid;surgical treatment.*

**ÖZET**

52 yaşındaki erkek hasta, , sol göğüs duvarında, 3 yıldır çapı giderek artan şişlik şikayeti ile başvurdu. Hasta kist eksizyonu için opere edildi. Histopatolojik inceleme ile kist hidatik teşhisi teyit edildi. Hastanın 2 yıllık gözlemi boyunca lokal veya sistemik kist hidatik nüksü gözlenmedi. Kist hidatikte karaciğer ve akciğer tutulumu olmaksızın diğer organlarda hastalığın görülmesi çok nadir bir durumdur. Bu yazıda, sol göğüs duvarında primer subkutan kist hidatik tespit edilen bir olguyu sunuyoruz.

**Anahtar Kelimeler:** *Hidatik kist;subkutan kist hidatik; cerrahi tedavi.*

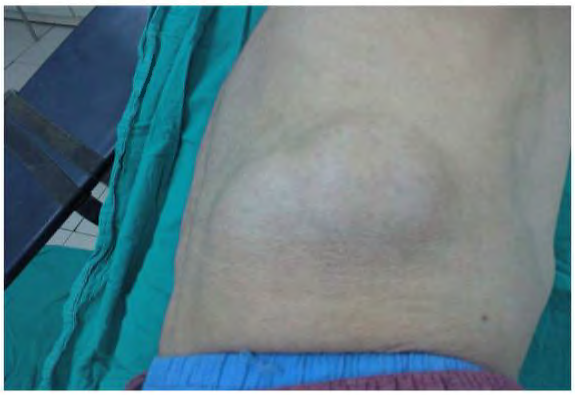
## INTRODUCTION

Human echinococcosis, commonly called hydatid disease, is a zoonotic infection caused by larval forms of small tapeworms of the genus Echinoccus. In humans, the two main forms are due to Echinococcosis granulosus and, less frequently, Echinococcosis multilocularis (alveolaris) (1). The definite hosts are animals such as dogs, wolves, and foxes. Intermediate hosts are herbivores (sheep, goats, cattle) and humans.The organs affected most

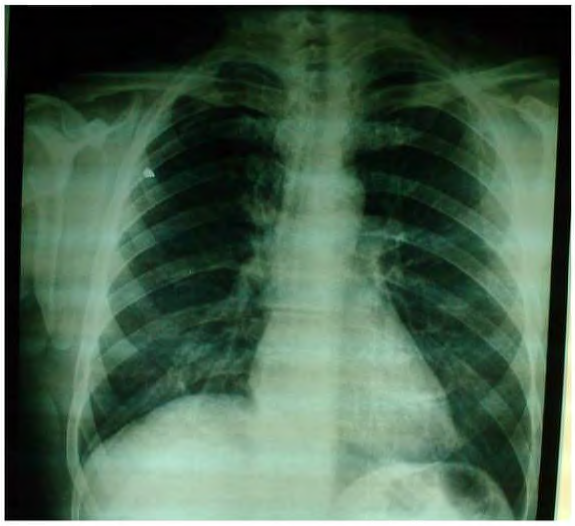
often are the liver (70%) and lungs (10–15%). Other locations are extremely rare (2). Primary subcutaneous hydatid cyst is very rare and the incidence is unknown. In this article, we present a patient who had an isolated hydatid cyst in subcutaneous tissue.

## CASE REPORT

52-year-old male patients with soft tumor left hemythorax on the arcus costarum were admitted **(Figure 1)**.



There was no history of trauma in this region, no history of fever and weight loss. The patient mentioned had developed a mass slowly for three years prior to admission. He was a farmer and had cattle and dogs. The subcutaneous masses were 12x8 cm in diameter and overlying the skin, flexible, painless and fluctuant. The patient had no history of surgery for a hydatid cyst in any other organ. Sonography disclosed echogenic mass with cystic structures inoculated in the muscle. Complete Blood Count, alectrolytes and biochemistry profile was normal. Postero-anterior chest film was regular **(Figure 2)**.



The patient underwent surgery for excision of the cyst. A germinative membrane was encountered during the surgical excision **(Figure 3)**.

Cyst was irrigated with hypertonic saline (3% NaCl) and waited for 10 minutes. The subcutaneous layers and skin were closed inserting a hemowack tube and it was removed two days later when there was no fluid flow. Histopathological examination revealed a hydatid cyst and the patient was treated with albendazole (10 mg/kg/day). There was no local or systemic hydatid cysts were during the two- year follow-up period.

## DISCUSSION

Hydatid disease stil continues to be a serious problem in countries like Australia, New Zealand, Middle East, Africa, India, South America, Turkey and Southern Europe (3). The disease is caused by Ecchinococcus Granulosus. The adult parasite resides in the intestines of animals such as dogs, foxes, wolves, and jackals. The ova, which are resistant to many environmental conditions, are excreted in the feces and ingested by the intermediate hosts, herbivores and humans. The ova hatch in the small intestine, where the parasites penetrate the mucosal wall and reach the liver via the portal vein. They are trapped in the sinusoids; therefore, the liver is the most frequently (70%) involved organ (4). The larvae which pass through this first filter, reach the lung via the right heart; the lung is the second most frequently (10–15%) involved site (4).

The larvae, which pass through this second filter cause hydatid disease in other organs (5–15%) (4). Various soft tissue sites involved by hydatid cysts and reported in literature include those of muscles and subcutaneous tissue (neck, chest, axilla, abdomen, thigh, and palm) (5). The mechanism of primary subcutaneous localization is unclear. The exact mechanism how the larvae pass through the liver and lungs and form solitary cyst elsewhere is not well understood. It is strongly possible that systemic dissemination via the lymphatic route accounts for cases with solitary cysts in uncommon sites (6). Direct spread from adjacent sites may be another mechanism of infection provided a microrupture has occurred (7). In our case, the cyst was in the subcutaneous tissue in the left chest wall.

Subcutaneous hydatid cyst may be secondary or primary. In secondary cysts, there is a primary location of hydatid disease like liver, lung, or spleen that is operated or not operated. Reports of primary subcutaneous hydatid cysts are very rare (6). In our cases, the hydatid cysts were located subcutaneously, the patients had not undergone previous surgery for hydatid cysts, and no hydatid cysts were found in other organs. Therefore, our patients were diagnosed as having primary subcutaneous hydatid cysts.

Routine laboratory tests can only reveal eosinophilia. Radiological imaging including USG, CT and MRI. The radiological findings of a thick cyst wall, calcification, daughter cysts, and a germinative membrane separate from the cyst wall are findings specific to hydatid cysts (8). Our case was diagnosed according to the appearance of the mass on superficial US and CT. Serology is a useful tool for the diagnosis. Highly sensitive tests include indirect haemagglutination and Latex agglutination test. Histopathological examination revealed a hydatid cyst in our case.

The best treatment option is total surgical excision without opening the cyst. If the cyst cannot be excised without opening, the fluid contents should be removed, the laminated membrane should be totally excised, and the cyst pouch should be irrigated with protoscolicidal solutions (9). Subcutaneous located cysts are more prone to rupture since they have not been diagnosed pre-operatively. We performed total cyst excision in our case and irrigated the surgical areas with protoscolicidal agents. Patient was discharged on the third day and put on albendazole postoperatively. There was no local or systemic hydatic cyst was during the two year follow up period.

In conclusion, subcutaneous hydatid cyst is rare and should be kept in differential diagnosis of a cystic lesion especially in regions where hydatid disease is endemic. Total excision of the

cyst with an intact wall is the best treatment.

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