

# Gluteal Hydatid Cyst: Case Report

## Gluteal Kist Hidatik

Mehmet Ali ERYILMAZ, MD,<sup>a</sup>  
Celalettin EROĞLU, MD,<sup>b</sup>  
Pinar KARABAĞLI, MD,<sup>c</sup>  
Osman Ege ÇOBANKARA<sup>d</sup>

Departments of

<sup>a</sup>General Surgery,

<sup>b</sup>Early Diagnosis and Screening

Center of Cancer,

<sup>c</sup>Pathology,

<sup>d</sup>Radiology,

Konya Education and Research Hospital,  
Konya

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Yazışma Adresi/Correspondence:

Celalettin EROĞLU, MD

Department of Early Diagnosis and

Screening Center of Cancer,

Konya,

TÜRKİYE/TURKEY

ceroglu44@gmail.com

**ABSTRACT** Hydatid cyst is a parasitosis caused by *Echinococcus granulosus*. Almost any organ in the body may be involved. The most affected organs are liver and lung. Muscle hydatid cyst is a rarely encountered zoonotic infection. In this report, a case of a 26-year-old woman with a primary hydatid cyst in the gluteus maximus muscle in the right gluteal region is presented. Clinically and ultrasonographically prediagnosed as hydatid cyst, the mass causing a painful swelling in the right gluteal region was entirely resected, and the diagnosis was confirmed with histopathological examination. Albendazole was orally started three days before the operation and continued for three months. Neither local nor systemic pathological findings were seen during the 18-month follow-up.

**Key Words:** Echinococcosis; buttocks

**ÖZET** Kist hidatik, *Echinococcus granulosus* tarafından oluşturulan bir parazitozdur. Hemen her organa yerleşebilir. En sık etkilediği organ karaciğer ve akciğerdir. Kas kist hidatigi ise oldukça nadir görülür. Bu yazıda, sağ gluteal bölgede gluteus maksimus kası içinde yerleşim gösteren primer kas kist hidatigi tanısı ile tedavi edilen 26 yaşında genç bir bayan olgu sunuldu. Sağ gluteal bölgedeki ağrılı şişlik oluşturan kitle klinik ve ultrasonografik olarak kist hidatik ön tanısı ile ameliyat edilerek kist tamamen çıkartıldı ve histopatolojik inceleme sonucunda tanı doğrulandı. Albendazol oral olarak operasyondan 3 gün önce başlandı ve 3 ay devam edildi. On sekiz aylık takipte olan olgunun lokal ya da sistemik patolojik bir belirtisinin olmadığı görüldü.

**Anahtar Kelimeler:** Kas kist hidatigi; gluteal bölge

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**H** ydatid cyst, whose hosts are primarily dogs, sheep and cattle, and sometimes human beings as the secondary host, is a parasitosis formed by larvae of *Echinococcus granulosus*. Almost any organ in the body may be involved. The most affected organs are liver and lung. While liver and lung function as filters for these parasites, some eggs, entering pulmonary circulation, could be transported into other organs.<sup>1,2</sup> Hydatid cyst encountered in soft tissues constitutes nearly 2.4 to 5.3% of all hydatid cyst cases.<sup>3</sup>

In this report, a 26 year-old woman diagnosed with a primary soft tissue hydatid cyst located in gluteus maximus muscle in the right gluteal region was presented in the light of the clinical findings, treatment regimen and results.

## CASE REPORT

A 26-year-old female applied to our clinic with the complaint of swelling and pain in the right gluteal region. She had been aware of the swelling for two months. The swelling recently enlarged and was noticed owing to the pain. The patient was complaining about the pain as she mobilized. There was no history of intramuscular injection, trauma or interventions. No other previous or familial characteristics were found. However, our case was living in a rural area, had a contact with the dog and was busy with raising animals.

On her examination, painful, fluctuating, slightly erupted out of skin level, and fixed mass of the gluteal muscle, approximately 10 x 7 cm in size was detected in the right gluteal region. Superficial palpation revealed no pathological lymph nodes. No other regional or systemic pathological findings were determined. Except for the decrease of white blood cell and lymphocytes, and the increase of neutrophils, no other pathologic findings were detected in the routine hemogram and biochemical tests.

On the ultrasonographic (USG) examination performed in the right gluteal region, a cystic lesion and/or hydatid cyst of 52 x 30 mm with well-defined margins, including septal hypoechoic areas in the right inferolateral region at the level of right gluteus maximus muscle under the skin, was detected. All other tests, such as abdominal USG, direct posteroanterior lung X-ray and brain CT were performed to determine the presence of accompanying cysts in other organs, however there were none. The test of hydatid cyst indirect hemagglutination (IHA) was found to be negative ( $< 1/32$ ). The case was accepted to be primary soft tissue hydatid cyst.

The case was operated under spinal anesthesia. When the gluteal muscle tissue was incized, the mass of approximately 5 cm with well-defined margins and adhered to the surrounding tissue within gluteal muscle was seen. The surroundings of the straw-coloured mass with well-defined margins was in cystic form. The cyst was irrigated with povidone-iodine for 5 minutes. Following the irrigation, the cyst was excised without rupturing. Germinative membrane surrounding the cyst and

all other structures related to the cyst were resected, as well as surrounding muscle tissue (Figure 1). On the histopathologic examination of the resected lesion, cuticular membrane and scolexes in purple violet colour were seen. These findings were consistent with hydatid cyst. No problems were encountered in postoperative period, and the complaints subsided. Albendazole tablet (at the rate of 400 mg, 2 x 2) was orally administered three days before the operation and continued for three months. The patient was followed-up for 18 months with no evidence of complaints and no local or systemic findings.

## DISCUSSION

Hydatid cyst is a parasitosis caused by *Echinococcus granulosus*.<sup>4</sup> Man is an accidental host in the life cycle of *E. granulosus*. Human infestation occurs after digesting the parasites. As a consequence of the digestion, the parasites spread to various organs via portal venous circulation by penetrating the lining of duodenum, and thus cystic hydatid disease develops, mainly involving liver or lung. Although liver and lung function as filters for parasites, some eggs spread to other organs via pulmonary circulation. The parasites develop into mature larvae in the last organ where they lodge, and typical cyst hydatid disease occurs.<sup>1,2</sup> The involvement of the organs by hydatid cyst is as follows: 73% in livers, 14% in lungs, 12% in peritoneum, 6% in kidneys and 4% in spleen. However, spinal cord, brain, bladder, thyroid gland, prostate, heart, eyes, breasts, skin, other muscles and bones are also ot-



FIGURE 1: Germinative membrane and daughter cysts after totally resected.

her involved parts of the body.<sup>5-7</sup> Soft tissue involvement is rare and reported to constitute approximately 1-5% of all hydatid cyst cases in many series. Hydatid cyst cases are also reported in femur, gluteal region, upper extremities, supraspinatus muscle and biceps brachii muscles.<sup>8-12</sup>

As in our case, the primary symptom in hydatid cyst cases is localized palpable swelling. Tuberculosis, mycosis, malignant fibrous histiocytoma, sarcoma and metastatic diseases should be considered in differential diagnosis.<sup>2</sup> For suspected cases, such serologic tests such as IHA and indirect immunofluorescence could be beneficial in the diagnosis of hydatid cyst in the muscles. In our case, the serological test was found to be negative, and biochemical tests were in normal limits. In order to distinguish the cystic palpable lesion on physical examination from soft tissue tumors, preoperative radiologic diagnosis is highly important to decrease biopsy requirement. Radiologic findings, however, are not specific. Even though ultrasonographic evaluation is known to be of value in the diagnosis of hydatid cyst in muscles, it is emphasized that the findings of magnetic resonance imaging (MRI) have recently become more valuable.<sup>13</sup> No MRI applications were performed in our case, but USG revealed a mass consistent with hydatid cyst. In general, hydatid cyst in muscles is diagnosed upon witnessed scolexes during the surgery.<sup>11</sup> Our case was evaluated as hydatid cyst while performing the surgery.

In the treatment of hydatid cyst cases, primary treatment option should be the excision of the cyst without causing any dissemination. In suspected cases with muscle hydatid cyst, it is necessary to avoid diagnostic biopsy and aspiration to prevent

the dissemination and rupture of the disease.<sup>11,12</sup> Scolidial agent is still routinely administered to inactivate scolexes without spilling out of the cyst during the surgery. However, no scolidial agent with ideal features exists although a great number of causative agents have been used. Povidone-iodine has experimental positive results in the prevention of secondary echinococcus.<sup>14</sup> In our case, after the aspiration, the cyst was irrigated with povidone-iodine and then totally excised along with daughter cysts during the surgery, although serology did not support cyst hydatid. The definitive diagnosis was obtained via histopathologic evaluation, and clinical and imaging prediagnoses were confirmed. The benefits of benzimidazole compounds (albandazole-mebandazole) in the treatment are still under debate, and it seems that there is no curative treatment. However, it is suggested that these compounds can be administered in prophylaxis in order to prevent the dissemination and recurrence of the disease.<sup>15</sup> Therefore, our case was treated with albendazole to prevent the dissemination and recurrence of the disease.

In spite of frequent recurrences in this disease, no local or systemic pathologic findings were encountered in our case during the 18 months follow-up with physical examination, biochemical and monitoring tests.

In this report, it was aimed to emphasize that hydatid cyst should be considered in the differential diagnosis of soft tissue masses, especially in endemic regions although it is rarely seen.

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