

# Primary hydatid cyst as a cause of pseudotumor of the buttock

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## ABSTRACT

**Primary muscle hydatidosis is very rare, accounting for less than 1% of hydatid cyst locations, and the gluteus muscle location is exceptional. The objective of this study is to report an exceptional location of hydatid cyst of the gluteus muscle presented like a tumor in the buttock region. Magnetic resonance imaging (MRI) is helpful in diagnosis, it represents the best test for hydatid cysts of the soft parts. It is important to establish the diagnosis preoperatively in order to limit the risk of anaphylactic shock or dissemination in the event of puncture or accidental opening of the cyst during resection. The eradication of this disease is based on prophyllaxis.**

**Keywords:** Hydatid Cysts; Soft Tissue Echinococcosis; Muscle; Childhood

## 1. INTRODUCTION

Hydatid disease is a rare and endemic echinococcal infestation in Mediterranean countries, Middle East, South America, Asia, and Australia [1,2]. It is most frequently located in the liver and lungs and is occasionally found in other organs.

Hydatid disease of the skeletal muscle is rare and represents approximately 3% of all patients with hydatidosis [3]. In muscular hydatidosis, the primary foci are generally thoracic or abdominal organs from which the dissemination occurs during the primary surgery. Primary skeletal muscle hydatidosis without involving the thoracic and abdominal organs is extremely rare. We report a case of primary hydatid cyst of the gluteus muscle presented like a mass in the buttock region.

## 2. CASE REPORT

A 15-year-old girl; living in rural area; presented with

the complaint of a painless, very slowly growing mass in his left buttock which had persisted for approximately 18 months. There was no history of trauma in the region, no history of fever nor weight loss was described.

On physical examination, a mobile, painless mass was palpated with normal-appearing skin. Ultrasonographic examination of the mass revealed a 100/60 mm cystic structure in deep soft tissue of the left buttock. And a magnetic resonance imaging (MRI) (**Figures 1(a), (b) and (c)**) demonstrated a cystic lesion located in the the gluteus maximus muscle. After intravenous gadolinium injection, there was enhancement of the pericystic layer. The preoperative examinations (complete blood count and blood biochemistry) revealed no abnormality except for the echinococcal haemagglutination test.

Based on the clinical, radiological and laboratory findings, the lesion was thought to be a primary hydatid disease of the gluteus maximus muscle. Chest radiography and abdominal ultrasonography ruled out hydatidosis in the chest and abdomen.

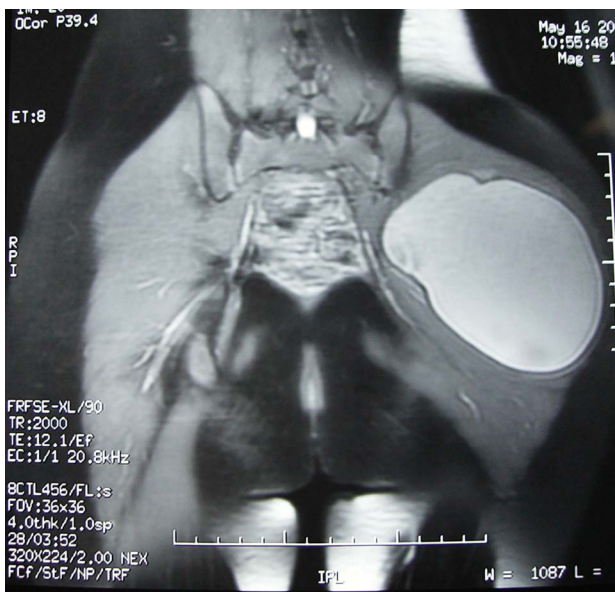
A total wide excision was performed without destroying the cyst wall (**Figures 2(a) and (b)**), Followed by irrigation of cystic cavity with hypertonic saline solution. Histopathologic examination of the specimen confirmed a hydatid cyst.

No recurrence was observed after 20 months of follow-up.

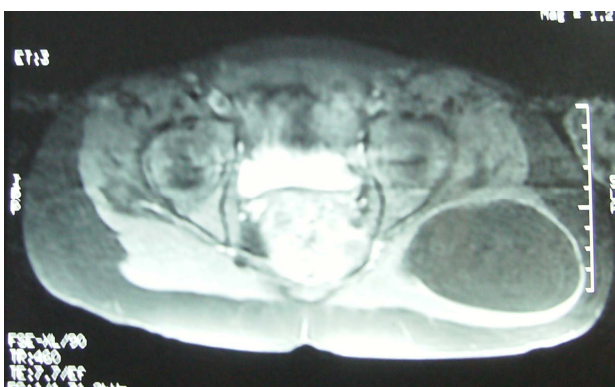
## 3. DISCUSSION

The hydatid cyst is a cosmopolitan parasitic infection that constitutes a problem of public health in developing countries' areas of breeding. In infants, the lung and liver are the most common sites of cyst development.

The primary muscular hydatid cyst is extremely rare even in endemic zones. This infrequency of muscular locations is explained by the fact that the larvae of the parasite, taking the portal circulation, stopped in 80% of cases at the liver and lungs, in addition, there are local



(a)



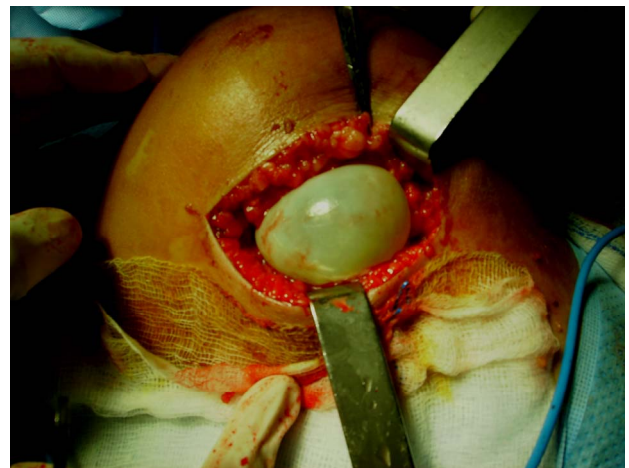
(b)



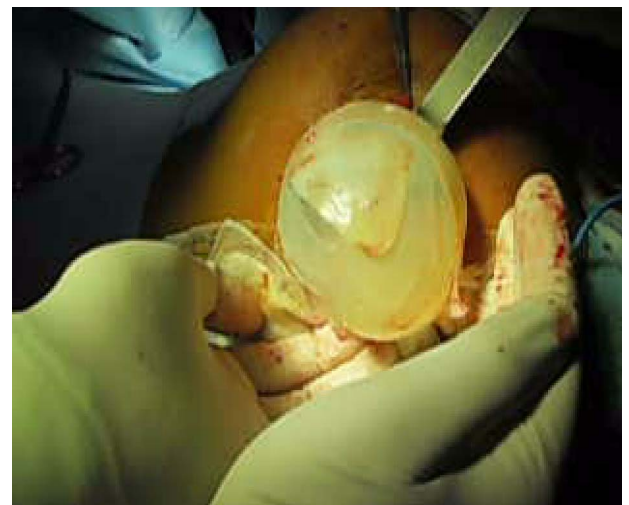
(c)

**Figure 1.** (a) MRI. Coronal T2-weighted image: an intramuscular unilocular hypointense cystic formation in the right buttock; (b), (c) MRI. Axial T1 and T2-weighted image shows hyperintense unilocular cystic lesion located in the gluteus maximus muscle.

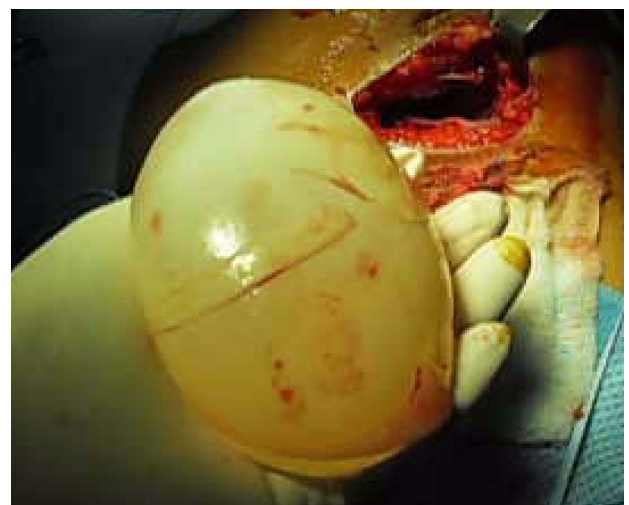
phenomena such as continual muscular contractions and the production of lactic acid which prevent scolex



(a)



(b)



(c)

**Figure 2.** (a) A total wide excision was performed without destroying the cyst wall; (b), (c) Intraoperative view of the mass (a). Macroscopic aspect: The entire hydatid cyst after surgical excision (b).

implantation [4-9].

Diagnosis of muscular echinococcosis is very difficult, because the symptomatology is insidious and non specific, but we must think to the hydatid disease when slowly growing soft tissue is seen in a patient from a rural area with good general health and especially from endemic countries.

Diagnosis of echinococcosis is required before any biopsy or surgical excision to prevent rupture of the cyst and prevent anaphylactic shock or local recurrence.

Ultrasound is most often the key examination for orienting the diagnosis of any tumefaction of the soft tissues, showing the size, localization and type of the cyst. The sensitivity of US is 95%, and if vesicular fibrils are present, the sensitivity of US increases to 100%. CT scan should be performed in suspicious cases or in order to determine the technique of surgery by determining the relationship with adjacent organs [10]. Preoperative diagnosis of musculoskeletal echinococcosis localisation is difficult clinically and radiologically. It may resemble of any soft tissue tumor. MRI is the first-choice diagnostic method in hydatid disease of the soft tissues. With its high contrast resolution, it provides a better study of the locoregional extension of the lesion and its relations with the nerve and vascular pedicles, while providing a meticulous analysis of the cyst walls [5,6,9,11]

Treatment of muscular echinococcosis is surgical. The best option is total surgical excision without breaking through the wall. The total pericystectomy represents the choice technique, since it avoids the complications of residual hull and solves the problem of recurrence [12-16]. However, it is not always feasible safe for deep cysts and in close contact with the vascular and nervous elements. In these cases, the fluid contents should be removed, the laminated membrane should be totally excised, and the cyst pouch should be irrigated with protoscolicidal solutions [15], or a partial pericystectomy can be proposed. Medical treatment must always be associated with surgery to prevent recurrence and is the only therapeutic option in inoperable cases [3,17,18].

We performed total cyst excision in our case and irrigated the surgical areas with protoscolicidal agents (hypertonic saline 10%).

The outcome was favorable without recurrence with a decline of 24 months.

#### 4. CONCLUSION

In summary, the echinococcus infestation muscle is a very rare affection that we can found commonly in rural areas. Intramuscular infestation may mimic soft tissue tumor. It can lead to rupture of the cyst with the expected risks of anaphylaxis and spread to other organs, and attach importance to proper preoperative diagnosis. Additional pharmacological treatment is necessary to achieve

a complete cure.

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