

## Case Report

# Primary Isolated Hydatid Cyst in Trapezes Muscle: A Extremely Rare Site

Manoucheher Aghajanzadeh<sup>1\*</sup>, Mehdi Karimian<sup>2</sup>, Zahra Sadat Segatoleslami<sup>3</sup>, Shirin Manshori<sup>3</sup>, Rassol Hassanzadeh<sup>4</sup>, and Tahereh Marasi<sup>2</sup>

<sup>1</sup>Department of Thoracic Surgery, Guilan University of Medical Sciences, Iran

<sup>2</sup>Dpartement of General Surgery, Shahrekord University of Medical Sciences, Iran

<sup>3</sup>Infectious Disease and Tropical Medicine Reserch Center, Shahid Beheshti University Medical Sciences, Iran

<sup>4</sup>Medical Student, Guilan University of Medical Sciences, Rasht, Iran

\*Corresponding author

Manoucheher Aghajanzadeh, Department of Thoracic Surgery, Guilan University of Medical Sciences, Iran, Email: maghajanzadeh2003@yahoo.com

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## Abstract

**Introduction:** Hydatid cyst is a condition commonly affecting liver and lungs caused most commonly by *Echinococcus granulosus* whereas musculoskeletal hydatidosis is very rare. Intramuscular hydatid cysts Usually are secondary and resulting from the spread of cysts from other organs, either spontaneously rupture or after spreading from operations for hydatidosis in other regions.

**Case presentation:** We present an unusual case of a primary hydatid cyst found in the base of neck in the trapezes (latismus muscle), muscle on the right side of neck in a woman with a non-specific clinical presentation. Ultrasound findings revealed a multilocular intramuscular solid and cyst lesion in the anterior aspect of trapezoid (latismus muscle) muscle. We removed the entire part of solid and cyst lesion surgically. Macroscopic and microscopic histopathological examinations confirmed the diagnosis of muscular hydrid cyst.

**Conclusion:** In regions where hydatid disease is endemic, a cystic lesion in any part of the body should be considered a hydatid cyst until proven otherwise. The best treatment is the total excision of the cyst with an intact wall.

## INTRODUCTION

Hydatid disease is a parasitic infection caused by the tapeworm *Echinococcus granulosus*. This parasitic disease is a significant public health concern in Iran, as an endemic country [1]. Life cycle of *Echinococcus* involves two hosts, one definitive carnivore host (dogs, cats and certain wild carnivores) and the other intermediate herbivore host (sheep, goats, swine, small rodents and other wild herbivores). Humans act as an accidental intermediate host is infected after ingesting viable oncosphere-containing eggs, which have been shed in the feces of the definitive host [2]. Various parts of body may be involved with hydatid cyst but the liver and lungs are the main locations [3]. Skeletal muscle infection is rare, and reported 0.5% - 4.7% of all cases of echinococcosis [4]. Hypothesized of rarity of muscular hydatid cyst is for the presence of lactic acid in the muscles that does not allow the larvae to grow in cysts [5]. Nevertheless, some cases of primary muscular hydatidosis at various sites have been reported as, Sartorius, biceps brachii, supra spinatus, gluteus, and soleus muscles, we are reporting a case of Isolated hydatid cyst in the right trapezius muscle. In review of literature, No

case of hydatid cyst in trapezius muscle is reported recently we would like to point out that, regardless of the site involved, hydatid cyst should always be considered in the differential diagnosis of any cystic and solid lesion.

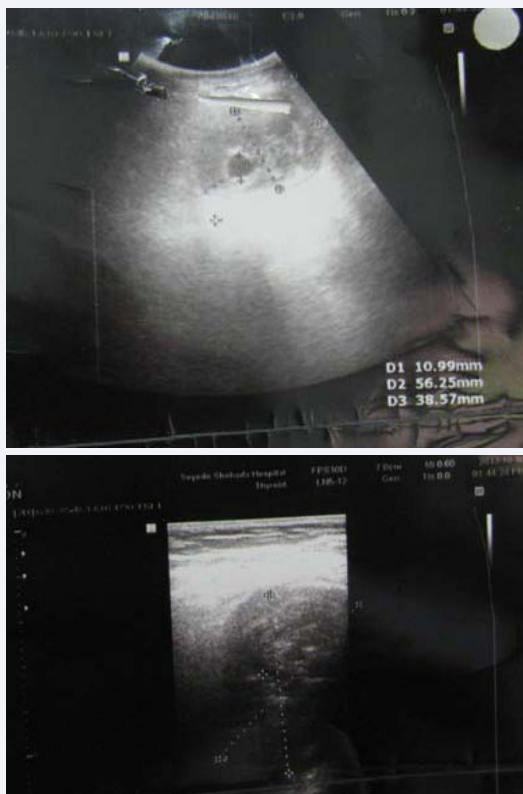
## CASE REPORT

A 43-year-old woman was admitted to our hospital with an enlarging soft-tissue mass in right posterior side of chest wall in the posterior axillary line. She had first noticed it from one year ago, and had no history of trauma, surgery or additional diseases such as infectious or malignant diseases. There were a dog and several birds in their yard but she has not been in contact with them. She had no history of weight loss. A physical examination revealed a mobile mass, measuring 8 to 10 cm that was solid, without tenderness and redness. There were no findings suggestive of cellulitis around the mass. We did not detect lymphadenopathy in other sites. Skin, neurologic, Pulmonary and heart examination was normal. Blood pressure was 115/75 mm Hg. The pulse was 80 beats per minute, and the respiratory rate 20 breaths per minute. The patient was afebrile. White cell count was 8500

per cubic millimeter, The ESR was 8, and The LFT was normal. CRP was negative. Ultrasound examination of the mass showed a multilocular solid and cystic lesion (Figure 4). In our case we used only US for diagnosis, because the patient was from deprived area and there were no facilities in that hospital. According to clinical examination and Ultrasound findings the patient was transferred to the operating room and under general anaesthesia we carefully isolated the entire mass from surrounding muscles and excised radically the mass and all tissues around the lesion (Figure 2). During surgical manipulation the cystic lesion was ruptured and the components of the cyst was exposed (Figure 3). Macroscopic and microscopic histopathological examinations confirmed the diagnosis of a hydatid cyst. Albendazole (10mg/kg) was started. Abdominal sonography was normal. Chest x ray showed no lung and rib involvement (Figure 5). Patient was discharged with good condition.

## DISCUSSION

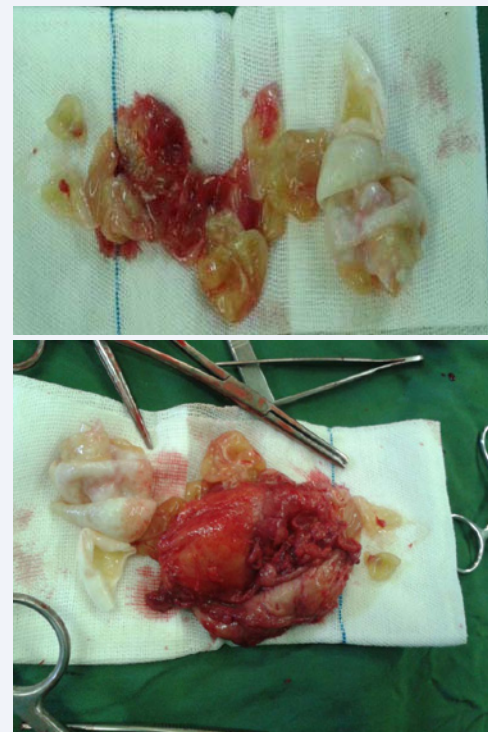
Hydatid disease is caused by the larval tapeworm of the genus *Echinococcus granulosus*, *E. multilocularis* and *E. oligarthus*. *E. granulosus* is the most common cause of hydatid disease [6]. The hydatid cysts trend to form in the liver (50-70%) or lung (20-30%) but may be found in any organ of the body, including brain, heart and bones (<10%) [7]. It can also affect the kidney, ureter, spleen, uterus, Fallo piantube, mesentery, pancreas, diaphragm and muscles [81]. Muscular hydatid cysts may be primary, but may also occur secondarily when cysts spread from other areas, either spontaneously or after previous operations for hydatidosis in other regions of the body [8,9]. Hydatid cysts in soft tissues are



**Figure 1,2** Ultrasound in two views showed a multilocular solid and cystic lesion.



**Figure 3** In traoperatively: show Germinative, laminated membrane.



**Figure 4,5** Show Germinative, laminated membrane and daughter cysts pericyst and muscle.

an unusual presentation of hydatidosis. Primary intramuscular hydatidosis is rare because the intramuscular growth of cysts is hindered by the muscle's contractility, and by the lactic acid in the muscle. Parasitic cysts tend to grow around the muscles of the neck, trunk and roots of the limbs, perhaps because there is greater vascularization and less muscular activity in these regions. They develop very slowly and act as space-occupying lesions, producing symptoms related to pressure on the surrounding tissues [5]. Other possible primary locations of the disease must be excluded by careful clinical and radiological examination of the patient, and these examinations must form the basis of the diagnosis. In particular, MRI images may identify various patterns of intramuscular hydatidosis such as its peripheral rim,

peripheral edema, peripheral enhancement with gadolinium and multilocular cystic lesion (daughter cysts). In our case we used only US for diagnosis, because the patient was from deprived area and there were no facilities in that hospital. Percutaneous needle or Open biopsy in this solid and cystic lesion must be avoided. The treatment of choice is complete surgical excision of the cyst mass and thorough irrigation of the surrounding soft tissues with hypertonic saline to prevent recurrence [5,10]. Administration of benzimidazole derivatives preoperatively and after surgery is advocated by some authors. In this case we use albendazole after surgery. The patient must be kept under clinical evaluation after surgery, for recurrence. Echinococcosis should be always suspected in differential diagnosis of cystic lesions in soft tissue until proven otherwise. Once the diagnosis is established, the surgeon should consider performing a radical procedure aiming in minimizing the possibility of a recurrence.

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### Cite this article

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