

## CASE REPORT

**Primary Hydatid Cyst of Thigh: A Case Report in Child***Javad Ghorroobi<sup>1</sup>, Leily Mohajerzadeh<sup>1\*</sup>, Alireza Mirshemirani<sup>1</sup>, Alireza Mahdavi<sup>1</sup>**<sup>1</sup>Pediatric Surgery Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran***Abstract:**

Hydatid cysts grow commonly in liver and lungs, but irregularly they are established in other sites. Occasionally few embryos run away the capillary filtrating systems of the liver and pulmonary and lead to hydatidosis of Peripheral organ. This case report expresses an uncommon case of subcutaneous hydatid cyst in the left thigh in child. Based on manuscript search, few cases are presented.

**Keywords:** Hydatid Cyst, Thigh, Child, Surgery

**Introduction:**

Occasionally few embryos run away the capillary filtrating systems of the liver and pulmonary and lead to hydatidosis of peripheral organ [1]. Hydatid cysts happen frequently in the liver, lungs, or both (more than 90%) [2]. The muscle is rarely receptive for echinococcal growing because of high level of lactic acid [3]. In literature, hydatid cysts accounted from every component of the human corpse such as liver, lungs, spleen, peritoneum, ovaries, bones, breast, and brain. Primary hydatid cyst of soft tissue is very uncommon, still in endemic regions, and reported approximate 0.5-5.4 % of all cases. Skeletal muscle involvement by hydatid cyst as primary disease reported in 3% of the patients [4].

**Case Report:**

A 5 year-old child referred clinic with a painless thigh mass. His parents complained that swelling was gradually increasing in size in last 6 month. There was no history of trauma. On examination

there was swelling in distal of posterior aspect of the left thigh. It was non-tender mass in the subcutaneous area. It was firm and free from the underlying structures. Blood tests were within normal limits. Ultrasonography showed a cystic lesion of a size of approximately 5 x 5 cm in the subcutaneous area of the left thigh. Thigh computed tomography revealed cystic masses localized in the left thigh space, with minimal invasion of the peripheral soft tissue (Fig. 1). He underwent surgery. The mass was dissected from soft tissue and underlying muscles and removed completely (Fig. 2). Macroscopic and microscopic examination of the sampling established hydatid cysts. Investigation of another organ was normal. In 6 month follow up no recurrence observed.



**Fig. 1: Left Thigh Computed Tomography Revealed Cystic Masses**



**Fig. 2: Cyst was Dissected from Soft Tissue and Underlying Muscles**

### Discussion:

Hydatid Disease (HD) is one of the major etiologies of parasitosis in human, secondary to larval period of *Echinococcus granulosus*, particularly in warm countries in African, South American, Middle Eastern, also India and Turkey [1]. In humans invasion by *E. granulosus* frequently happens in the liver (55-70%) and lung (18-35%). In investigations occurrence of cyst at extraordinary site is to 8-10%. Hydatid disease is able to engage any element of the human body excluding nails, hair and teeth [5]. Portal vein has been recognized as major passageway for parasitic extension, but other routes rarely have been known such as portocaval shunts, lymphatic involvement by *E. granulosus*, and retrograde passage from vena cava to subclavian vein [6, 7].

This case report is about, atypical locations of a hydatid cyst in a child. It is presented diagnostic modalities and therapeutic approach in this patient. HD in form of atypical demonstration leads to diagnostic trouble. In this condition, symptoms and signs of HD demonstrate obscure. Most of cases are recognized incidentally at work up for distinct objection. In this circumstance, the

unusual location leads to diagnostic troubles and specific investigative exams do not show 100% reliability [8]. Several surgical approaches have reported for the treatment of hydatid cysts. Indications for surgery consist of bulky cysts with several daughter cysts, superficial cysts prone to rupture, cysts with neighboring organs pressure, and cysts in atypical locations like as brain, bone, seminal vesicle, spleen, kidneys, etc [9-15]. One of main concern about this disease is demonstration of delayed local recurrence and expansion of hydatidosis at the prime location. So the patient should be stay on ordinary follow-up for these possibilities [11].

### Conclusion:

Echinococcosis can become visible in variable locations in human body, so it must be supposed in differential diagnosis of any cystic mass or anonymous tumor lesion in children from endemic regions. With appropriate surgical and medical treatment, and ordinary follow-up, recurrence of the disease decreases.

## References

1. Akkaya H, Akkaya B, Gönülcü S. Hydatid disease involving some rare sites in the body. *Turkiye Parazitol Derg* 2015; 39(1):78-82.
2. McManus DP, Zhang W, Li J. Echinococcosis. *Lancet* 2003; 362(9392):1295-1304.
3. Garcia-Diez AI, Ros Mendoza LH, Villacampa VM. MRI evaluation of soft tissue hydatid disease. *Eur Radiol* 2000; 10(3):462-466.
4. Ozkoc G, Akpınar S, Hersekli MA. Primary hydatid disease of the quadriceps muscle: a rare localization. *Arch Orthop Trauma Surg* 2003; 123(6):314-16.
5. Mushtaque M, Mir MF, Malik AA, Arif SH, Khanday SA, Dar RA. Atypical localizations of hydatid disease: experience from a single institute. *Niger J Surg* 2012; 18(1): 2-7.
6. Kabiri el H, Zidane A, Atoini F, Arsalane A, Bellamari H. Primary hydatid cyst of the posterior mediastinum. *Asian Cardiovasc Thorac Ann* 2007; 15(5):e60-2.
7. Delis SG, Bakoyiannis A, Exintabelones T, Triantopoulou C, Papailiou J, Dervenis C. Rare localizations of the hydatid disease. Experience from a single center. *J Gastrointest Surg* 2007; 11(2):195-8.
8. Safioleas M, Stamatakos M, Zervas A, Agapitos E. Hydatid disease of the seminal vesicle: A rare presentation of hydatid cyst. *Int Urol Nephrol* 2006; 38(2):287-9.
9. Dervenis C, Delis S, Avgerinos C, Madariaga J, Milicevic M. Changing concepts in the management of liver hydatid disease. *J Gastrointest Surg* 2005; 9(6):869-77.
10. Safioleas M, Misiakos EP, Kakisis J, Manti C, Papachristodoulou A, Lambrou P, et al. Surgical treatment of human echinococcosis. *Int Surg* 2000; 85(4):358-65.
11. Wani RA, Malik AA, Chowdri NA, Wani KA, Naqash SH. Primary extrahepatic abdominal hydatidosis. *Int J Surg* 2005; 3(2):125-7.
12. Mirshemirani AR, Najd Sepas H, Mohajerzadeh L. A case report of hydatid cyst of the parotid in a two-year-old child. *Iranian J Surg* 2010; 17(4).
13. Alireza Fahimzad, Abdollah Karimi, Sedigheh Rafiei Tabatabaei, Shahnaz Armin, et al. Overview of hydatid disease in Iranian Children. *Arch Pediatr Infect Dis* 2015; 3(3):e30084.
14. Alaei F, Shahmohammadi A, Alaei M, Soleymani E. Hydatid cyst of heart, liver and lung. *Arch Pediatr Infect Dis* 2013; 1(2):102-4.
15. Alireza Nateghian, Roya Isa Tafreshi, Arezoo Najari, and Atefeh Vaezi. The validity of a scoring system in predicting intravenous immunoglobulin treatment failure in children with kawasaki disease. *Arch Pediatr Infect Dis* 2016; 4(1):e27527.

\***Author for Correspondence:** Leily Mohajerzadeh, Pediatric Surgery Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran Email: mohajerzadehl@yahoo.com