

CASE REPORT

HYDATID CYST OF THIGH: A RARE PRESENTATION

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ABSTRACT: Hydatid disease is endemic in many parts of the world and caused by echinococcus granulosus. It develops most commonly in the liver and lungs. We present an unusual case of hydatid disease which was located in the left thigh. Although the diagnosis is suggested by clinical examination supported by ultrasound but confirmation is on macroscopic and histological examination. Hydatid disease should be considered in the differential diagnosis of all cystic masses in all anatomic locations especially in endemic areas.

KEYWORDS: Hydatid disease, Thigh, Surgical excision.

INTRODUCTION: Hydatid disease is a parasitosis caused by the larval forms of the genus echinococcus of which echinococcus granulosus is the commonest 1, 2. It is a common disease in India 1. In India, the highest prevalence of hydatid disease is reported from Andhra Pradesh and Tamil Nadu 3. The parasite has a "dog-sheep" cycle with man as an intermediate accidental host. Human infection occurs by ingestion of the eggs of Echinococcus inadvertently with food, especially unwashed vegetables and water contaminated with faeces from infected dogs or by a direct contact with a dog. After ingestion, the eggs are freed from their coating and larvae penetrate the mucosa of the jejunum reaching through the venous and lymphatic channels to any region of the body where they transform into small cysts 4. Liver and lungs are common sites 1, 2 and rare sites of this parasitic disease have been infrequently reported 1. Intramuscular hydatid cysts grow gradually and may mimic a soft tissue tumor 5. Thus, the diagnosis of soft-tissue hydatid cysts needs a high index of suspicion.

CASE REPORT: A 23 year old male farmer presented with lump left thigh for one year. The lump was painless and progressively increasing in size. There was no history of trauma or other systemic complaints.

Patient's examination revealed a 15 x 10 x 8 cm cystic, non-tender lump in left mid-thigh medial aspect. The lump was smooth, margins well-defined and skin over the lump was normal. Movements at the left hip and knee were full and painless. Systemic examination was normal.

Routine investigations were within normal limits. Chest x-ray and ultrasound of the abdomen were normal. Ultrasound of the left thigh (Fig. 1) revealed a well defined 15 x 8 cm lump with multiple cysts of varying size with possibility of hydatid cyst. Fine needle aspiration cytology (FNAC) only revealed clear fluid and was inconclusive.

Albendazole (400 mg bid) was started two weeks preoperatively. Surgical excision of the cyst (Fig. 2) was done under spinal anesthesia. On explorations a 15 x 8 x 6 cm cystic mass was found in left mid thigh between the medial and posterior muscle group. Macroscopic examination of the excised mass revealed typical hydatid cyst with multiple daughter cysts of varying size. Histopathological examination confirmed the diagnosis of hydatid cyst.

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Postoperative period was uneventful. The course of albendazole was continued postoperatively. There was no recurrence in three year follow up period.

DISCUSSION: Hydatid disease may affect several organs in human body and thus represents a major challenge for the general surgeon⁶. The most commonly involved organs are the liver (75%) and the lung⁶ (15.4%), as these act as first and second filter respectively where the hexacanth embryo is most likely to be trapped¹. The parasite may affect any organ, however, muscle is supposed to be an unfavorable site for infestation because of its high lactic acid concentration⁷. Musculoskeletal echinococcosis is observed in 1–5.4% of all cases of hydatid disease⁶. There have been very few reports of thigh involvement⁶. In the series of Safioleas et al, thigh involvement was seen in only 0.37% of 272 cases of hydatid cysts⁶.

Investigations used for the preoperative diagnosis of hydatid cysts are ultrasonography (USG), CT, MRI, laparoscopy, echo guided percutaneous cyst puncture, FNAC and serology^{1, 2, 8}. Ultrasonography remains the major noninvasive screening tool to discover the primary site of the disease and may confirm the diagnosis of hydatid disease by demonstrating the pathognomic daughter cysts⁹. The CT appearance of the hydatid cyst is not diagnostic as it may mimic malignant and benign conditions such as congenital cyst, pseudo cyst or hematomas^{10, 11}. However, the presence of daughter cysts, germinal epithelium detachment and calcification may confirm the diagnosis. Similarly, MRI can reveal a cystic mass containing daughter cysts, with rim sign and “water Lilly sign”¹². FNAC is now considered safe and diagnostic in hydatid cyst disease¹, but was inconclusive in our case. The possibility of contamination² and anaphylactic reaction with FNAC should also be kept in mind. Modern serology tests are positive in only up to 80% of the abdominal hydatid cysts¹.

Surgical excision of the cyst is the treatment of choice^{2, 6}. Adjunctive anthelmintics chemotherapy is recommended to reduce the risk of dissemination during surgery and to prevent recurrence².

CONCLUSION: Hydatid cyst should always be considered in the differential diagnosis of cystic lesions in any anatomic location, especially in endemic areas. Ultrasound is the diagnostic modality of choice supplemented by CT scan. Surgical excision confirms the diagnosis and is curative. Thus high index of suspicion and judicious use of investigations are the keys.

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Figure 1: USG showing left thigh mass composed of multiple cysts.



Figure 2: Excised specimen – hydatid cyst left thigh.

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