

Case Report

Primary hydatid cyst of intercostal muscles: a rare entity

Preeti Malik^{1*}, Karamveer Singh²

¹Pt. B.D. Sharma, Post graduate Institute of Medical Sciences, Rohtak, Haryana, India

²Department of General Surgery, General Hospital, Bahadurgarh, Jhajjar, Haryana, India

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*Correspondence:

Dr. Preeti Malik

E-mail: dr.priti.malik@gmail.com

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ABSTRACT

Usually intramuscular hydatid cysts are secondary, resulting from other areas either spontaneously or after surgery for hydatidosis in other regions. We present an unusual case of a primary hydatid cyst found in left chest wall of a 38-year-old woman, presenting as an enlarging soft tissue lump with pain which was diagnosed intraoperatively.

Keywords: Hydatid cyst, Muscular echinococcosis

INTRODUCTION

Echinococcosis is an infectious disease caused by the cestode *Echinococcus* commonly affecting liver and lungs. Isolated muscular hydatid cyst is a rare entity. We are reporting a case of primary hydatid disease in left lower intercostal muscles. Such cases are rarer in literature.

CASE REPORT

A 38 year old female presented in Surgery Department, General Hospital, Bahadurgarh, Jhajjar, Haryana, India, with a slowly enlarging painful lump of 4 months duration in left lower chest anterior to mid axillary line at the level of 10th rib. On clinical examination, the lump was tender on palpation with restricted mobility (not freely mobile). Earlier, the patient had undergone an incomplete course (2 months) of antitubercular and other medical treatments for similar complaints from various hospitals but was not diagnosed and relieved. Patient was screened for tuberculosis via serological, radiological and sputum examinations, Mantoux test, neither of which suggested tuberculosis as etiology. FNAC of the lesion

was reported as a lipoma. Patient was explored after informed consent under local anaesthesia for surgery.



Figure 1: Incision showing pearly white hydatid cyst.

On dissection, beneath the subcutaneous fat, a lump was palpable. On further dissection and retraction of

intercostal muscles, a cystic lesion was visible, the aspiration of which revealed clear fluid. On opening the cystic cavity, pearly white membranes were seen in the cyst along with the clear fluid suggesting diagnosis of hydatid cyst. The lesion was isolated with 10% povidone iodine soaked gauze for 10 minutes and the cyst was closed after aspiration (due to unknown extent of the lesion). The wound was washed with 10% povidone iodine and was sutured to be re-explored later after CT scan of thorax. Patient was kept under observation for 24 hours post exploration for anaphylaxis/untoward incident and tablet albendazole 400 mg twice a day along with antibiotic cover was started. The definitive surgery was done later under general anaesthesia after knowing the extent and location of hydatid cyst.

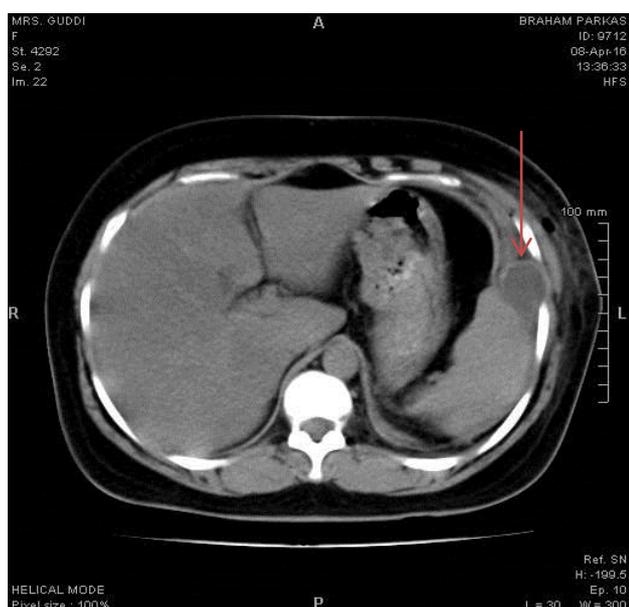


Figure 2: Computed tomography (arrow) showing hydatid cyst in intercostal muscles.

DISCUSSION

Hydatidosis is an infectious disease caused by the tapeworm of the genus *Echinococcus granulosus*, *E. multilocularis* and *E. oligarthus*. *E. granulosus* is the most common cause of hydatid disease.¹ Contamination of human beings (intermediate host) occurs accidentally through contact with dogs (definitive host) or by the ingestion of food or drink containing the larval stages of the parasitic tapeworm. It is endemic in the Middle East and other parts of the world including India, Africa, South America, New Zealand, Australia, Turkey and Southern Europe.²⁻⁴ Infestation by hydatid disease in human beings most commonly occurs in the liver (55-70%) followed by the lung (18-35%). The two organs can be affected simultaneously in about 5-13% cases.^{5,6} It can also affect the brain, heart, kidney, ureter, spleen, uterus, fallopian tube, mesentery, pancreas, diaphragm and muscles.⁷

One report from Turkey described a hydatid cyst in the adductor muscle group.⁸ Abdel-Khaliq described pectoralis major muscle involvement.⁹ Pouche et al showed hydatid cysts in rectus and back muscles.¹⁰

Primary hydatid disease of the skeletal muscle is rare, as the parasite has to cross pulmonary and hepatic barriers to reach the muscles.¹¹ The high lactic acid level in muscle tissue is considered unfavorable for the survival of parasite.¹²

Classically the patient presents with a long history of cystic lump with muscle fixation. Although eosinophilia is expected in patients with parasitic infestations, this may not always be seen.¹³ Pre-operative diagnosis can be made on ultrasound, CT, or MRI by the characteristic appearance of a unilocular or multilocular cyst with multiple daughter cysts.

Surgery is the optimal treatment of hydatid disease and thorough irrigation of the cystic cavity with scolicidal agents (exposure time) like hydrogen peroxide 3% (15 minutes), hypertonic saline 15-30% (10 minutes), povidone iodine 10% (10 minutes), formalin 10% (10 minutes), chlorhexidine gluconate 5% (10 minutes), silver nitrate (5 minutes) to prevent recurrence.¹⁴ The surgical procedure may be combined with 3 cycles of tablet albendazole 400 mg twice a day for 28 days (with a periodic gap of 14 days) to prevent recurrence. The patient must be kept under long term clinical evaluation after surgery, to check for recurrence.

This patient had not been operated for hydatid disease previously and investigations did not reveal any hydatid cyst in brain, liver, lung or spleen. So this patient was diagnosed, having primary hydatid disease of musculoskeletal system.

Though intramuscular hydatid cysts are reported in literature as rare findings, any description of hydatid cyst in intercostal muscles could not be located in the literature.

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