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AN UNUSUAL CHEST WALL CYST – FAMILIAR, YET SO BIZARRE!

General Surgery

Dr Risha Shetty Junior Resident, Department of General Surgery, BGS GIMS, Bengaluru.

Dr Lokesh M N* Associate Professor, Department of General Surgery, BGS GIMS, Bengaluru.* Corresponding Author

ABSTRACT

Ecchinococcus granulosus is a common parasitic infection in endemic countries such as India, South Asia and Africa. It is usually seen in the liver, lungs, and brain. Primary hydatid cyst of the chest wall is an unusual presentation of a common endemic disease and can be misdiagnosed. Our patient is a 26-year-old lady with a history of swelling over the left side of her chest for a year. Excision was done under local anaesthesia. Post-procedure histopathology of the specimen confirmed the diagnosis. Patient was put on a course of antihelminthic. She remained asymptomatic during her follow-up with no new lesions reported.

KEYWORDS

Hydatid, cyst, disease, chest wall

BACKGROUND:

Hydatid disease which is characterised by cystic lesions in different regions of the body have been well documented since ancient times. Out of the several known species, 3 species capable of causing hydatid cysts in humans are Echinococcus granulosus, Echinococcus multilocularis and Echinococcus vogeli[1]. E. granulosus is the most prevalent causative[1]. Hydatid disease is typically seen in population with routine animal contact and foci of it exist in India with Andhra Pradesh and Tamilnadu reporting maximum cases. The most common target organ is liver in up to 70% of the cases. Hydatid cysts in the lungs and other organs like subcutaneous and skeletal tissue constitute the rest.[2] Primary chest wall hydatid cyst is very rare, even in areas with high prevalence. Its diagnosis may be easily missed courtesy its atypical presentation unless considered as a differential diagnosis. We report this case of isolated hydatid cyst of the chest wall that was pre-operatively diagnosed as a benign cystic lesion.

CASE REPORT:

A 26-year-old lady presented to our outpatient department with the history of a swelling on the left side of her chest for 1 year. She gave no history of pain, trauma, or fever. She had no significant medical or surgical history. On examination, there was a solitary ovoid swelling on the left upper chest wall posteriorly measuring 3 x 3 cm. Swelling was non-tender and firm in consistency. There were no other swellings. An ultrasound of the region showed a well-defined thick walled, oval, intramuscular cystic lesion with clear contents, in the latissimus dorsi muscle on the left side, measuring 3.1 x 1.2 x 3.3cm. The cyst was excised in total under local anaesthesia and sent for histopathology along with aspirated fluid. Post-operative period was uneventful, and patient was discharged on the same day. The surgical specimen histopathology was reported as Hydatid cyst of the chest wall. During her first follow visit, patient underwent an ultrasound abdomen, chest X-ray and a CT brain which showed no evidence of any other lesions suspicious of hydatid disease. She was treated with Tab Albendazole 400mg OD for 12 weeks with regular Liver function test monitoring. Patient was compliant to treatment, completed the full course of anti-helminthic and reported no further lesions.

Image 2. Post-operative specimen

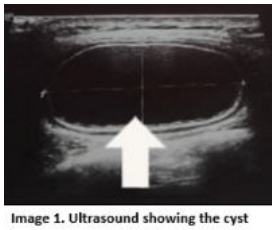
Image 1. Ultrasound showing the cyst

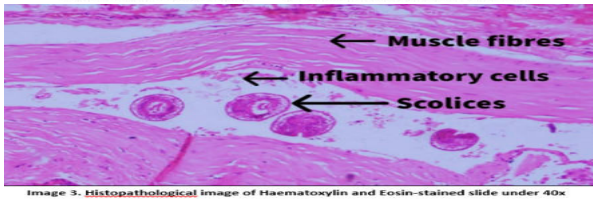

Image 3. Histopathological image of Haematoxylin and Eosin-stained slide under 40x

DISCUSSION:

Hydatid cyst is a sequelae of E. granulosus ingestion. The precursors of the tapeworm form cysts in various parts of the body either by lymphatic or haematogenic infiltration. Such cysts are rarely seen in the sternum, ribs, or the soft tissues of the chest wall. Primary hydatid cyst of the chest wall is seldom encountered in clinical practice with the reported incidence being 0.09% to 3.4% as per two large series (6500 to 8000 subjects)[3].

There are two hypothesised mechanisms of cyst formation according to literature. The first one is the passage of the embryo through the duodenal wall into the portal vein or peri gastric lymphatics which communicate with the thoraco-mediastinal lymphatics and the thoracic duct. The other mechanism is when an intrathoracic extrapulmonary hydatid cyst lies in proximity to the ribs, it may result in erosion of the bone and chest wall involvement[1]. The former mechanism might partly explain the occurrence of chest wall hydatid cyst in our patient because of the absence of cysts elsewhere in the body. Full thickness chest wall involvement and rib destruction is seen in 2.3% of extrapulmonary thoracic hydatid cysts[4]. In this patient, the cyst was in the intramuscular plane in the left latissimus dorsi muscle without invasion into deeper structures.

Accr et al recommended surgery along with Albendazole therapy for pre-and post-operatively for favourable outcomes[4]. Our patient underwent a total excision of the cyst under local anaesthesia. Pre-operative Albendazole could not be started as the diagnosis was made after specimen histopathological examination. Oral Albendazole (10mg/kg) given for 3 months has been proven to be effective in treating hydatid disease with excellent results [5,6]. Our patient received 400mg of Albendazole once daily for 12 weeks post excision of the cyst and reported no new lesions during follow up.

CONCLUSION:

Primary hydatid cyst of the chest wall is a rare presentation of a common parasitic disease. Due to its highly antigenic cyst fluid, inadvertent needle aspirations or excisions can be catastrophic if this diagnosis in not kept in mind. Surgery combined with a course of pre- and post-procedure antihelminthic drugs is the treatment of choice.

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