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HYDATID CYST OF FOREARM: A RARE CASE REPORT

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ABSTRACT Hydatid cyst is a zoonotic disease caused by *Echinococcus granulosus*, 'dog tapeworm'. It is endemic in India, and mostly humans who handle dogs become accidental hosts. Liver and lungs are the most common sites of infection accounting for more than 70% of cases, though rarer sites of involvement have been reported. We are presenting the first case report of primary hydatid cyst in the muscle of forearm from India. A young female presented with a non-tender swelling of right forearm for six months limiting mobility of the elbow joint. Imaging studies showed presence of multiple cystic structures resembling Hydatid cyst within the muscles of forearm, and absence of any such lesion in abdomen, thorax and head. The patient was operated and histological and microbiological examination confirmed the diagnosis. Patient was put on tablet Albendazole and was followed for six months without any recurrence of her symptoms.

KEYWORDS : Hydatid cyst, muscle hydatid, forearm, *Echinococcus granulosus*

INTRODUCTION

Hydatid cyst is a zoonotic disease in humans caused by the larval form of tapeworms (*Echinococcus* spp.) of canines such as dogs. Humans may become accidental intermediate hosts of these cestodes while handling dogs. [1] The most common cause of Hydatid disease in India is *Echinococcus granulosus*, involving mainly liver (50-70%) and lungs (20-30%). [2] However other sites such as brain, heart, bones can also get infected. [3] The cysts slowly increase in size and are generally asymptomatic, often detected incidentally on imaging studies. Symptoms, if present, are mainly due to mass effect of the cyst. [1] Severe anaphylactic reaction due to cyst leakage and seeding of daughter cysts at other areas of body due to cyst rupture are two important complication of this otherwise benign disease. [2]

Hydatid disease is endemic in India. About 8-10% of them are reported from unusual sites. [4] We are reporting a case of primary Hydatid cyst in the muscles of right forearm of a young female because of the unusual site of presentation.

CASE REPORT

A 23 year old female presented with a gradually increasing swelling on medial side of right cubital fossa for the last six months. The swelling was only associated with limitation of movement of elbow joint and discomfort. There was no associated pain, redness, itching or any other systemic symptoms. She was normotensive, non-diabetic and immune-competent. She has received a course of amoxicillin clavulanate (prescribed outside) for this ailment. She resided near a tannery and has history of contact with dogs. On examination the swelling was soft in consistency, not attached to skin or deeper tissue, not showing any signs of inflammation. Ultrasonography of the swelling revealed multiple cystic structures resembling hydatid cyst. Patient was given albendazole (400mg for 2days) and investigations were done to locate the primary site (if any). A CT scan of abdomen, HRCT chest and CT scan of brain were done sequentially as each came negative for any cystic lesion. Excystation was done under regional anaesthesia. The cysts were infected and were in active stage containing numerous daughter cysts. All the cysts were carefully removed and the cavity was washed with hypertonic saline. The patient was asked to continue albendazole for 4 weeks and to do regular follow-up.

The pus and cysts were sent for microbiological and histological examination (Fig. 1).

Fig. 1 Hydatid cysts recovered from the patient (black arrow)

Direct Gram stain of the pus revealed presence of gram positive cocci in pairs and clusters but no growth of any organism was obtained from it after aerobic and anaerobic incubation in blood agar plates. This may be because the patient had received a course of amoxicillin clavulanate. The fluid from the cyst was centrifuged and the sediment was examined. Wet mount revealed the presence of scolices. Histological examination with haematoxylin and eosin stain showed presence of trilaminar membrane with innermost layer containing nuclei and giving rise to brood capsules (Fig. 2).

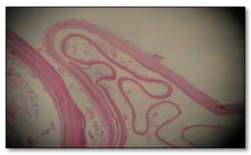

Fig. 2 Haematoxylin and Eosin stain showing trilaminar membrane

DISCUSSION

Hydatid cyst of muscle is a rare entity. Most of the cases reported are from lower extremities (quadriceps, gluteus and biceps femoris), back (trapezius, erector spinae) and arms (biceps brachii). [5,6,7,8, 9,10] We are the first to report a case hydatid cyst in the flexor group of muscles of forearm from India. Muscular hydatid cysts are mostly secondary to spread after rupture of a distant primary cyst mainly in liver or lung. However in our case no evidence of involvement of any other site was found. Complete excision of the cyst is the treatment of choice. Post-operative albendazole can be given to prevent recurrence. [1] I.H. Bouraoui et. al. reported a similar case of muscle hydatid of forearm in 2011, from Sousse, Tunisia. [11]

CONCLUSION

Echinococcus granulosus can infect any part of the body. In case of a slow growing non-tender mass in the muscles, the possibility of hydatid cyst should be considered.

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