

Solitary hydatid cyst in thigh without any detectable primary site

Tarun Kumar Pathak,¹ Sougata Roy,² Subhabrata Das,³ Arun Achar,⁴ Ashok Kumar Biswas⁵

Department of Microbiology,¹ Department of Surgery,^{2,3} Department of Dermatology,⁴ Intern,⁵ Midnapore Medical College & Hospital, West Bengal, India.

Abstract

Echinococcus granulosus causes a zoonotic infection called Cystic Echinococcosis (CE). Surgeons meet with hydatid cysts of the liver and lungs with reasonable frequency. However hydatid cyst may also appear in other parts of the body.

A 30 years old lady presented with a smooth slow-growing subcutaneous nodule on the anteromedial side of the right thigh with no detectable primary site in the liver or lung. The case was subsequently diagnosed as hydatid cyst of muscle and radical surgery was done under coverage of anihelminthic drug.

The common practice in this type of case is to do fine needle aspiration cytology (FNAC) taking the lesion to be a soft tissue neoplasm. The aim of this case presentation is to be aware of that in case of a diffuse non-tender swelling with history of gradual increase in size, hydatid cyst should be considered in the differential diagnosis.

Keywords: Echinococcus granulosus, Zoonotic infection, Cystic echinococcosis, Hydatid cysts, Subcutaneous nodule, Anihelminthic, Fine needle aspiration cytology (FNAC).

Introduction

Cystic echinococcosis (CE) caused by the tape worm Echinococcus granulosus is a zoonotic infection occurring in different parts of world. It is also unusual in northern Europe. The endemic areas include the Mediterranean countries, the Middle East, Iceland, the southern part of South America, New Zealand, Australia, and southern parts of Africa; the

latter five are intensive endemic areas. The incidence of CE in endemic areas ranges from 1-220 cases per 100,000 inhabitants, while the incidence of Alveolar Echinococcus (AE) ranges from 0.03-1.2 cases per 100,000 inhabitants, making it a much more rare form of echinococcosis. Infestation with *E vogeli* is the most rare form of echinococcosis and is reported mainly in the southern parts of South America. Surgeons meet with hydatid cysts of the liver and lungs with a reasonable frequency. However when the cyst appears in the unusual sites such as extremities, the clinical suspicion is unlikely.¹

Case Report

The patient, a 30-year-old lady, presented with a smooth, large swelling on the anteromedial side of her right thigh. There was a history of gradual increase in size for last four years. On clinical examination, a firm mass sized 12cm X 8cm was found to be free from the skin and subcutaneous tissue and appeared to arise from the underlying muscles and fascia but not fixed to the bone. Clinically it appeared to be a soft tissue benign tumour.

Routine haematological tests show increase (9%) of eosinophil count and no abnormality detected in chest X-ray. MRI of the thigh was done which revealed a hydatid cyst along with some daughter cysts arising from quadriceps muscle of thigh. CT scan of the abdomen and thorax did not reveal any hydatid cyst of liver and lung.

The patient was put on oral Albendazole (10-15 mgm/kg/day) for 4 weeks. The area was explored and the complete cyst along with 1cm rim of the surrounding soft



Figure-1: Per-operative picture of hydatid cyst operation.

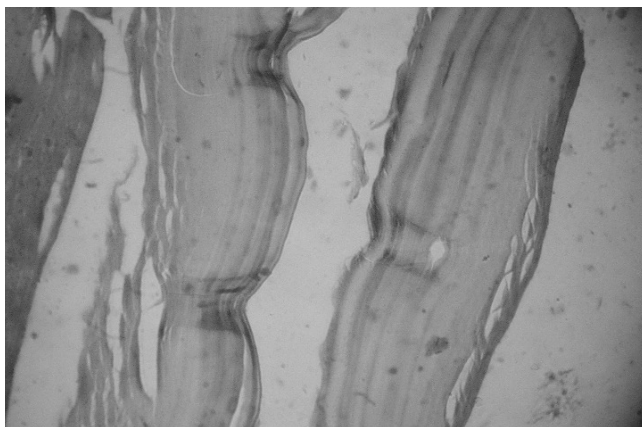


Figure-2: Histopathology pathology of operated cyst wall proved it was of hydatid cyst.

tissue including muscle was removed. The whole area was irrigated with suitably diluted (0.5%) Cetrimide solution. Haemostasis was secured and wound was closed over a drain [Figure-1]. Muscular hydatid cyst was confirmed by histological examination [Figure-2]. Post operative course of Albendazole for one month was given to the patient to reduce the chance of recurrence.

The patient had an uneventful postoperative recovery. No local recurrence or systemic illness was detected during postoperative follow up period within one year.

Discussion

Cystic echinococcosis (CE) can involve any organ. Organs affected by *E. granulosus* are the Liver (63%), Lungs (25%), Muscle (5%), Bones (3%), Kidney (2%), Brain (1%)

and spleen (1%).¹ Most of the times involvement is usually characterized by a palpable mass.^{3,4} Clinical presentation of the hydatid disease depends on the size and site of the lesion.⁵

Radical surgery (total pericystectomy or partial affected organ resection), conservative surgery (open cystectomy) or simple tube drainage for infested communicating cysts are choices of surgical techniques.⁶ The more radical the procedure, lower the risk of relapses but higher the risk of complications.⁷ Sterilization of the cyst cavity is done by different scolicial agents and cetrimide solution (0.5%) provides the best protection with least complications.⁸ Pre and Postoperative one month course of Albendazole or two weeks of praziquantel should be considered in order to sterilize the cyst and decrease the chance of anaphylaxis, decrease the tension in the cyst wall and to reduce the recurrence rate postoperatively.⁹

Conclusion

Hydatid cyst of liver and lung is not uncommon in clinical practice. When the cyst is present in the rare site such as in extremities and clinically presents as benign soft tissue tumour, the suspicion of hydatid cyst is unlikely. This is further confusing when the patient does not have any primary hydatid cyst in lung or liver.

Doctors should also consider the possibility of hydatid cyst in any patient presenting as a soft tissue swelling attending the clinic. As CE can affect any organ of the body, a higher suspicion of the disease is justified in an apparent cystic neoplasm especially in the endemic region.

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