



DILEMMA IN DIAGNOSIS OF CYSTIC SWELLING IN THE ARM: - A CASE REPORT
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ABSTRACT

A female child of 12 years presenting with cystic swelling in the left arm for the past two months the differential diagnosis eg. Lymphangioma, Haematomas, liquefied lipoma lastly Cysticercosis was discussed. MRI of the arm revealed Cysticercosis.

Key words:

Cystic swelling of the arm,
Cysticercosis, Surgery.

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INTRODUCTION

The tape worm the causes Cysticercosis is endemic to many parts of the world including China, Southeast Asia India, sub Saharan Africa, Latin America. Worldwide as of 2010 it caused about 2000 death up from 700 in 1901. Cysticercosis refers to tissue infection after exposure to eggs of *Taenia Solium*, the pork tape worm and *Taenia Saginata*, beef tapeworm. The disease is spread via the faecal oral route through contaminated food, water and improper cooked beef and pork flesh and is primarily food borne disease (Markell *et al.*, 1999). The clinical syndrome caused by this parasite is categorized as either neuro cysticercosis or extra neural Cysticercosis e.g. intestinal tape worm, subcutaneous or muscular which is one of the cystic lump in human beings. The case can be treated medically or surgically. We report a case Cysticercosis which was surgically treated.

Case Report

A female child of 12 year old presented in our Surgical O.P.D. of R.L. Jallapa Hospital. Her staple food was beef mutton, came with lump on her left arm for the past 2 months the onset was insidious slowly progressing and attained a size of 9x6cms at present, occasionally she had pain and discomfort. On examination single cystic swelling on the anterior part of the bicep muscle, the skin was free non tender cystic, i.e. fluctuant, trans-illumination was negative may due to secondary to infection, the ultrasonography and MRI scan fig.1 shows intramuscular cysticercosis involving the forearm muscle biceps.

Surgery was contemplated by excision of the cystic lesion Fig.2. The wound was irrigated with scolicidal agent Chlohexiden to prevent recurrence. Histopathology report showed features of consistent with degenerated Cysticercosis cyst, patient developed secondary wound infection and at later date secondary suture was done. Nearly six month follow up with oral antibiotic and anti helminthics shows no recurrences. The ultrasonography report showed intra muscular cysticercosis with collection. Patient was treated surgically, complete excision of cyst was done (Figure 3). Histopathological report showed features consistent with degenerated cysticercous cyst. Post operatively patient developed surgical site infection (which was treated with appropriate antibiotics and antihelminthics. Secondary suturing of the wound was done.

DISCUSSION

Taeniasis, the condition caused by infection with adult worm, *Taenia solium*, is worldwide in distribution, but endemic in some parts of the world. While taeniasis is rarely seen in those who do not eat pork, cysticercosis occurs in all ethnic groups regardless of dietary habits. Cysticercosis in man is caused by the encystment of the larval form of *T. solium* and is the most important clinical manifestation of *T. solium* infection in man.⁴ In the normal life cycle of *T. solium*, man is the definitive host and pig is the intermediate host. Cysticercosis in man occurs when man accidentally becomes the intermediate host, by ingestion of eggs through contaminated water and food which in turn is related to poor hygiene and poverty, therefore, the disease is mainly seen among low socio-economic classes in China, Eastern Europe, India, Indonesia, Latin America and Pakistan.⁵

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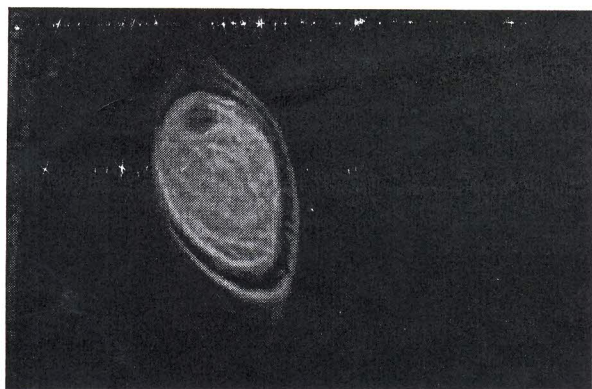


Figure 1. MRI of the cyst

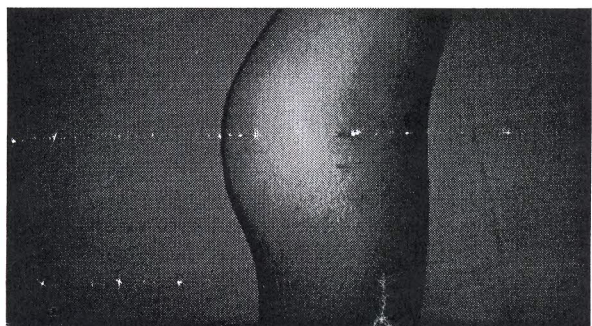


Figure 2.

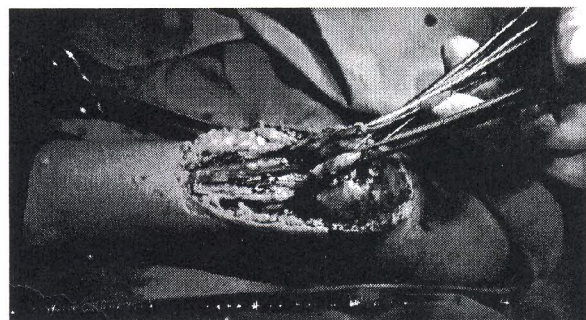


Figure 3.

The incubation period ranges from months to over ten years. Ova are digested in the stomach and release oncospheres which penetrate the intestinal wall and reach the bloodstream. These oncospheres develop into cysticerci in any organ but are common in brain, subcutaneous tissue, muscle or eyes (Davis, 2005). The Cysticerci can develop in any voluntary muscle in humans. Invasion of muscle by cysticerci can cause myositis with fever, eosinophilia and muscular pseudo hypertrophy leading to atrophy and fibrosis. In most cases, it is asymptomatic since the cysticerci die and become calcified (Lozano *et al.*, 2012; Davis, 2005).

Previously stool samples were used to demonstrate tapeworm eggs but only a small minority of patients with cysticercosis will harbor a tapeworm, rendering stool studies ineffective for diagnosis. Antibody to cysticerci by ELISA method is more sensitive and specific. However, Individuals with intracranial lesions and calcifications may be seronegative. cysticercosis-specific antibodies can react with structural glycoprotein antigens from the larval cysts of *T. solium* (Malla *et al.*, 1992). Ultrasonography is useful for subcutaneous and muscular cysticercosis (Main *et al.*, 2001). CT or MRI is the most useful method of diagnosis. CT scan shows both calcified and uncalcified cysts, as well as distinguishing active and inactive cysts (Wadia *et al.*, 1988). Treatment recommendations for subcutaneous and muscular cysticercosis include surgery and antihelminthics (Goldsmith, 1988).

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