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Original Research Paper

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CYSTICERCOSIS CHEEK IN A PAEDIATRIC PATIENT – A RARE CASE

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ABSTRACT Cysticercosis cellulosae is a systemic parasitic infection caused by the larval stage of pork tapeworm, taenia solium which involve humans as either a definitive or secondary host. It is a common disease in developing countries. The cases presenting as an isolated muscle mass is an extremely rare entity and demands documentation. Herein, we present a case of healthy pediatric patient who presented with unilateral cheek swelling which on ultrasound suggested a benign cystic lesion. The diagnosis was confirmed on fine needle aspiration cytology (FNAC).

KEYWORDS : Cysticercosis, cheek swelling, taenia solium, pork tapeworm

INTRODUCTION:

Cysticercosis is a parasitic infection caused by larval stage of pork tapeworm taenia solium. This condition is endemic in developing countries of Asia and Africa due to poor sanitation facility and close interaction between humans and animals.[1-3] The common sites are CNS, eye, striated muscle, subcutaneous tissues, liver and lungs. Isolated muscular involvement is rare.[2-5] When it affects mouth, it is noted in tongue, labial or buccal mucosa.[3-6] Cheek muscles involvement are rarely reported. We encountered one case of isolated cysticercosis of cheek.

The presentation is mostly a unilateral nodular swelling with mild pain or painless with no other symptoms. The clinch to the diagnosis was made only after a high index of suspicion and proper radiological investigation. The diagnosis was confirmed on cytological evaluation.

CASE REPORT

A 4-year-old child presented to the hospital with complaint of swelling in left cheek for last 2 months. The swelling was prominent, painful, insidious in onset, and gradually progressive. Occasionally the patient had a dull aching pain which was confined to that region. However, no other significant history could be elicited relevant to the present condition. No history of toothache or fever, no diminution of vision, no episodes of seizure was noted in the patient.

The examination revealed a prominent, solitary, nodular, firm swelling measuring 2x2 cm in left cheek [Figure 1A]. The swelling was tender on palpation with local rise of temperature and freely mobile. Ear, nose and throat examination were within normal limit. The other side cheek was normal. No swelling in any other parts of the body was noted.

The differential diagnosis could be lymphadenitis, parotid sialolithiasis, cysticercosis, soft tissue abscess, salivary gland tumors, mesenchymal tumors and hemangioma. A detailed clinical, radiological and pathological evaluation was done. Complete blood counts and routine biochemical parameters were within normal limits. Ultrasound was done which showed well defined lesion with internal liquefaction seen in left masseter muscle measuring 1.6x1.4 cm. There is a 3mm sized hyperechoic focus seen within the lesion which suggested partially liquefied lesion in left masseter – suggestive of benign cystic lesion with abscess.

Fine needle aspiration cytology (FNAC) was done from the swelling and smears were prepared and stained with Giemsa and Papanicolaou stain. Smears prepared showed fragments of fibrillary material with interspersed small nuclei, suggestive of bladder wall of parasite [Figure 1B &C- Pap, 200X & 400X]. The background showed inflammatory infiltrate comprising of neutrophils, lymphocytes, few scattered eosinophils in a proteinaceous background. A diagnosis of Cysticercosis was confirmed on cytopathological examination.

Further evaluation was performed to rule out other foci of cysticercosis in the body. Contrast enhanced computed tomography (CECT) brain did not reveal any abnormality. Fundus examination of both eyes was also normal. After detailed assessment, no other foci of involvement were found, and the patient was treated as a case of isolated cysticercosis of left masseter muscle.

Incision & drainage of the abscess was done with curettage of the granulation tissue. A pediatric consultation was also done and syrup albendazole was given for 2 weeks. The patient was followed up after 2 weeks and the swelling had disappeared completely. There was no evidence of any swelling on follow up after 3 months.

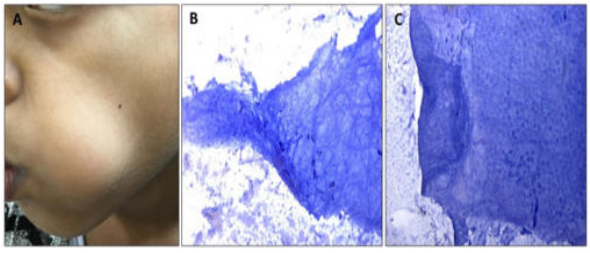

Figure 1A-C: A- Clinical image showing prominent, solitary, nodular, firm swelling measuring 2x2 cm in left cheek; B&C- FNAC smears showing large fibrillary fragments with interspersed small nuclei. Suggestive of bladder wall of T. solium [B&C- Pap, 200X & 400X]

DISCUSSION

Cysticercosis is a systemic parasitic infection caused by larval stage of pork tapeworm, Taenia solium. Human beings acquire cysticercosis through faeco-oral contamination with Taenia solium eggs from tapeworm carriers. Human beings serve either as definitive or intermediate hosts. The consumption of inadequate cooked pork is primary cause as pigs serve as intermediate host. It can also result from ingestion of tapeworm eggs through contaminated food, water or dirty hands. The disease is a major public health problem in China, Asia, India, Peru, Africa.[3-6]

Most frequently affected decade was third (32%) followed by fourth.[2-6] In our case, the child was 4 years old. Cysticerci are spherical, milky white cysts containing fluid rich in glycoproteins and a single invaginated scolex with hooklets. The most common affected sites are subcutaneous tissues, brain, orbit and skeletal muscle. The increased blood supply in these tissues as compared with other organs are hypothesized as a reason for preferential survival and growth of cysticerci in these sites.[5-6]

Rarely they become inflamed and manifests as a growing area of redness, oedema and pain. Inflammation of tissues suggested death or degeneration of parasites with leakage of antigens and cellular response of body. Isolated muscular cysticercosis pose a diagnostic dilemma to the clinician due to rarity and non-specific manifestations. Cysticercosis may remain asymptomatic for variable period of time or may present with local symptoms.

High resolution sonography is considered pathognomic of cysticercosis.[1, 3-5] In our case, a high-resolution USG revealed well defined lesion with internal liquefaction seen in left masseter muscle suggesting of cysticercal abscess. However, the definitive diagnosis can be given by FNAC or excision biopsy which shows hooklets, scolex or spiral wall of cysticercosis cellulosae.

The vesicular form of cysticercosis has classical ultrasound appearance of a small cystic lesion with an eccentric nodule and surrounding mild oedema. The eccentric nodule represents the scolex of the worm and features are diagnostic for cysticercosis. CT SCAN and MRI reveal characteristic appearance of cysticercosis which is enhancing cystic lesion with eccentric nodule. Treatment should be based on manifestations and anatomical area involved. Medical management is specifically recommended where surgical treatment is risky or not possible as in neurocysticercosis. Praziquantel and Albendazole are two recommended antihelminthic drugs for treatment of cysticercosis.[4-6]

Surgical excision is recommended for ventricular, ocular, spinal and symptomatic subcutaneous cyst.[5-6] In our case, it was intramuscular cysticercosis in buccinator muscle, with tenderness and the skin overlying the swelling was tense and shiny. We performed incision & drainage along with curettage of granulation tissue. After 3 months of post-operative follow up, no recurrence was seen.

CONCLUSION

Isolated muscular cysticercosis should be considered as a differential diagnosis in cases of solitary swelling of muscle causing a diagnostic conundrum. The role of high-resolution USG is significant in its diagnosis; however, a definitive diagnosis is made on FNAC or histopathological evaluation.

Medical management is confined to risky areas. Surgical management like I&D, curettage and surgical excision is to be done for localized cysticercosis. Health programs to spread awareness about personal and community hygiene can reduce the incidence of cysticercosis and its varied manifestations in the population.

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