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RESEARCH ARTICLE

UNUSUAL SITES OF A COMMON LESION IN A PATIENT

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ABSTRACT

Cysticercosis is a parasitic infection which is caused by larval form of pork tapeworm, Taenia Solium. This condition is endemic in developing countries of Asia and Africa. The common sites are central nervous system (CNS), eye, striated muscle, subcutaneous tissues, liver and lungs. But very few cases of eyelid cysticercosis have been reported in the literature. The same patient had a similar swelling on left ear lobe. Hereby, we report a case of cysticercosis of eyelid and cheek in a 19-year-old female patient who presented with two swellings, one on the right upper eyelid on medial side and other on left upper cheek. Both these swellings were clinically diagnosed as epidermal cyst because of its exclusive site of presentation. Histopathology of excised eyelid lesion showed evidence of cysticercosis. Fine needle aspiration was done for the cheek swelling which confirmed the diagnosis of cysticercosis in that region too.

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INTRODUCTION

Cysticercosis is one of the common parasitic infections seen in developing countries of Asia & Africa. This parasitic infection is caused by larval stage of taenia solium (Rai, 2016; Gill, 2010). Poor sanitation facility and close interaction between humans and animals usually provide a bed for these infections to grow (Rai, 2016; Gill, 2010; Salaria, 2017). The common sites are CNS, striated muscle, subcutaneous tissues, liver, lungs, eye (Gill, 2010; Salaria, 2017). Isolated eyelid and cheek cysticercosis are rarely reported in literature (Salaria, 2017; Garcia, 2014; Gupta, 2000). Our case adds to much rarity in the fact that both these sites were seen in our single patient. Though cytology can also detect the presence of this infection; histology is the definitive diagnostic tool to confirm the diagnosis of cysticercosis.

CASE REPORT

A 19-year-old female presented to the hospital with complaint of swelling in right upper eyelid and also left cheek for last 2 months. The eyelid swelling was a vague one, measuring 1x1 cm with adjacent mild edema & redness [Fig 1A]. The swelling was insidious in onset, gradually progressive. Occasionally, the patient had a dull aching pain which was confined to that region. On examination, a small swelling, measuring 1.5 x 1.0 cm was also noted on left upper cheek which was slightly fixed, non-tender [Fig 1B]. However, no other significant history could be elicited relevant to the present condition.

No history of trauma, toothache or fever, no diminution of vision, no episodes of seizure was noted in the patient. Ear, nose and throat evaluation along with detailed eye check-up were within normal limit. The other side of cheek and eyelid was normal. No swelling in any other parts of the body was noted. A provisional diagnosis of epidermal cyst at both sites was made based on clinical examination. 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 upper cheek region measuring 1.5x1.2 cm. There is a 3mm sized hyperechoic focus seen within the lesion which suggested the presence of a benign cystic lesion with abscess. Ocular ultrasound revealed the presence of a cystic lesion on right upper eyelid. Fine needle aspiration cytology (FNAC) was done from the cheek swelling and smears prepared showed fragments of fibrillary material with interspersed small nuclei, suggestive of bladder wall of parasite [Figure1C]. The background showed mixed inflammatory infiltrate in a proteinaceous background. A diagnosis of Cysticercosis was confirmed on cytopathological examination. For the eyelid swelling, surgical excision was done and specimen sent for histopathological evaluation. We received a small oval mass, measuring 0.8x0.8 cm, cut section of which showed a tiny cyst filled with clear fluid. On examination of H&E-stained sections, a larval form cysticercus was noted with duct-like invagination with double layered eosinophilic membrane [Fig 1D]. No adjacent evidence of inflammation was noted in sections examined. A further evaluation was performed to rule out other foci of cysticercosis in the body.

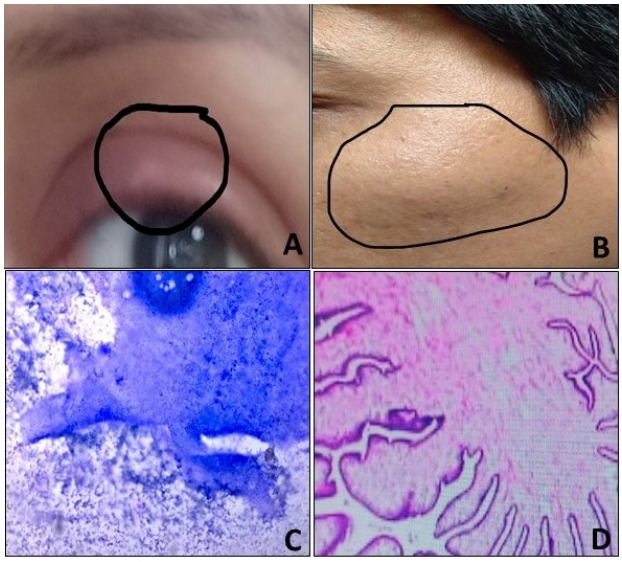

Figure 1A-D A&B- Clinical images showing vague nodular swelling over right upper eyelid & over left cheek; C- FNAC smear showing large fibrillary fragments with interspersed small nuclei. Suggestive of bladder wall of T. solium [C-Pap, 200X]; D- Section from eyelid swelling shows a duct-like invaginations, lined by a double layered eosinophilic membrane [H&E- 200X]

Contrast enhanced computed tomography (CECT) brain did not reveal any abnormality. Fundus examination of both eyes was also normal. After a detailed assessment, no other foci of involvement were found and the patient was treated as a case of isolated cysticercosis of left masseter muscle. Tab albendazole was given to the patient. The patient was followed up after 2 weeks and no recurrence of similar swelling was noted in the patient after 3 months of follow up.

DISCUSSION

Cysticercosis infection in human beings, is a systemic parasitic infection caused by larval stage of pork tapeworm, Taenia solium (Rai, 2016; Gill, 2010).Faeco-oral route is the common mode of transmission of this infection. Human beings can be a definitive or intermediate hosts. Pigs serve as an intermediate host; hence consumption of improperly cooked pork is the primary cause for this infection (Garcia, 2014; Gupta, 2000). It can also result from ingestion of tapeworm eggs through contaminated food, water or dirty hands. This disease raises a major public health concern in few countries like China, Peru, India, etc. The incubation period in case of cysticercosis can vary and individuals can remain asymptomatic for years.4-7The common sites being affected are brain, eyes, skeletal muscle, however only a handful cases of eyelid cysticercosis have been reported in literature (Rai, 2016; Garcia, 2014; Gupta, 2000). In our study we found a case of cysticercosis in eyelid in a 19-year-old female patient. The swelling was slowly progressive in subcutaneous plane, and provisionally diagnosed as benign cystic lesion. Similar case was noted by Rai et al in their study in 2016 (Rai, 2016). The occurrence of it over cheek is also not common (Gill, 2010; Kumar, 2011). Our patient had both these swellings in rarer location.

Usually, it affects individuals in 3rd decade of life followed by 4th. In our case, the female was 19-years-old (Salaria, 2017; Garcia, 2014;).[3-5]Gupta et al[5] have highlighted the role of ultrasound in diagnosis of subcutaneous cysticercosis showing characteristic low reflective cysts and high reflective scolices inside. High resolution sonography is considered pathognomic of cysticercosis.[1, 3-5] CT SCAN and MRI reveal characteristic appearance of cysticercosis which is enhancing cystic lesion with eccentric nodule. In our patient, a high-resolution USG was done for cheek swelling which revealed well defined lesion with internal liquefaction seen in left upper cheek muscle pointing to a diagnosis of cysticercal abscess. But the definitive diagnosis was made on cytological evaluation.

Grossly, these cysts appear as circumscribed, white to tan, cystic nodules containing a clear fluid.[2-4] Gradually, the cyst begins to degenerate, fluid becoming dense and opaque and finally can present as a calcified nodule.[2-4] Microscopically, the cystic cavity contains the larval form with scolex with hooklets and 2 pairs of suckers.[3-5] The larval form comprises of duct-like invaginations, lined by a double layered eosinophilic membrane. 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. Medical management is specifically recommended where surgical treatment is risky or not possible as in neurocysticercosis.5 Praziquantel and Albendazole are two recommended antihelminthic drugs for treatment of cysticercosis.[6-9] In certain cases, where a mass is formed or complications are seen, excision can be done, especially in cases of ventricular, ocular, spinal and symptomatic subcutaneous cysts.[8-9] In our case, it was intramuscular cysticercosis in upper cheek region, for which only FNAC was done. However, for the eyelid swelling, excision was done to prevent any ocular or neurological complications. After 3 months of post-operative follow-up, no recurrence was seen.

CONCLUSION

A diagnosis of cysticercosis should always be considered as a differential diagnosis in cases of solitary swelling of over facial region or eyelid. Radiology also plays a significant role in detection these cystic lesions. But cytology along with histopathological confirmation is diagnostic in detection of this parasitic infection. Our case is much rarer in the fact that, two uncommon sites were noted for this parasitic infection in a single patient. Hence a diligent diagnostic work-up is essential to confirm the diagnosis and prevent any neurological complications of cysticercosis. Medical management is useful in endemic region; however, surgical excision or curettage of such cystic lesion is important in some cases which require intervention.

A community-based awareness and screening programs should be organized to make the public aware of such infections, thereby preventing late complications.

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