Cysticercosis in the Neck Region, Mimicked Thyroglossal Cyst: A Rare Presentation

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ABSTRACT

Introduction: Human cysticercosis is caused by larval form of the pork tapeworm, Taenia solium. Cysticercosis in neck region is rare and is difficult to diagnose.

Case report: We present a case of cysticercosis in neck region in young female who presented with non-tender slow growing cystic swelling in front of neck. A clinical diagnosis of thyroglossal cyst was made. Ultrasonography also suggested thyroglossal cyst. The FNAC diagnosis was consistent with benign mucous cyst. However diagnosis of cysticercosis was confirmed by histopathological examination of surgically removed cystic tissue.

Conclusion: A diagnosis of cysticercosis at this unusual site is very rare and depends mainly on histopathological examination. Although it is rare, cysticersosis should be considered as a differential diagnosis for a cystic lesion in the neck region.

Keywords: Cysticercosis, Neck Region, Thyroglossal Cyst

INTRODUCTION

Human cysticercosis is one of the commonest parasitic infection, caused by Cysticercus cellulosae, the larval form of pork tapeworm, Taenia Solium. It is a major public health problem in developing countries where ingestion of tapeworm eggs through contaminated food and water and open air defaecation is most frequent.[1-4] The common sites of occurrence of cysticercosis are the subcuteneous tissue, skeletal muscle, brain, eye,heart, liver, lungs and peritoneum.[1,3,5,6]

The neck region is the uncommon site for cysticercosis.[5] Here we reported a case of subcuteneous cysticercosis in the neck region which mimicked thyroglossal cyst on clinical examination as well as on ultrasonographic evaluation. The diagnosis of cysticercosis was made only by histopathological examination of surgically removed cystic tissue.

CASE REPORT

A 30 years old female patient presented at Midnapore Medical college, Paschim Medinipur, W.B, India with small swelling in front of left side of the neck region (Figure-1) which she noticed 6 months back. The swelling was slow growing and non-tender. On clinical examination, the swelling was tense cystic which was moving on protrusion of the tongue but not moving on deglutition. On clinical examination, the diagnosis of thyroglossal cyst was considered. Ultrasonography of neck was performed with high frequency linear transducer using gray scale imaging and colour flow mapping. Infrahyoid cystic lesion of 28 X 17X9 mm size was seen (Figure-2). Suggestive diagnosis of thyroglossal cyst was given on ultrasonography. Fine needle aspiration cytology (FNAC) of swelling in front of the neck region was done. Smears prepared from aspirated fluid on FNAC showed plenty of macrophages and scattered lymphocytes in the mucinous background. The FNAC diagnosis was consistent with benign mucous cyst (Figure-3). Result of serum thyroid profile examination was also within normal range.

Sistrunk operation was planned. On surgery (Figure-4) the cyst was ruptured (Figure-5) and pus-like whitish fluid came out. The fluid was sent for culture and Zeihl Neelsen stain. The cyst was attached to the body of the hyoid. The cyst along with portion of the body of the hyoid was also removed. The post-operative period was uneventful. No growth was seen on culture of the fluid and stain for acid fast bacilli was negative. On histopathological examination of surgically removed cystic tissue, the confirmatory diagnosis of cysticercosis was given on the basis of presence of trilaminated corrugated chitinous cell wall of Cysticercus cellulosae with chronic inflammatory cell infiltration in the surrounding fibrous tissue (Figure-6 & 7)

No cyst was found in the brain on CT Scan, abdomen especially liver on Ultrasonography, lungs on chest X-Ray and retina on ophthalmic examination.

The patient was put on tablet Albendazole 400mg twice daily for 2weeks. The patient is doing well.

DISCUSSION

Cysticercus cellulosae, the larval stage of Taenia solium, passes its life cycle in two hosts. Human is definite host who harbours the adult worm and the pig is the intermediate host who harbours the larval stage. Human infection occurs due to ingestion of eggs from tapeworm host via transmission through faecal – oral root. Then the human acts as an accidental intermediate host with the manifestation of cysticercosis in different organs of the body.[7,8] Human cysticercosis, a potentially deadly infestation due to ingestion of the eggs of Taenia Solium, present in contaminated food or water or unwashed hand or through autoinoculation resulting from reverse preristalsis.[3]

The cysticercosis in the neck region is notable because it mimicked thyroglossal cyst on clinical examination as well as on ultrasography. FNAC diagnosis was also not conclusive. Only the histopathological examination revealed the presence of cysticercus in the neck region. However, careful search showed no cyst in brain, abdominal organs and lungs through CT Scan of brain, USG of whole abdomen and chest X-Ray respectively. So the patients presented with non-tender cystic swelling in the neck region can present a diagnostic dilemma.

Though subcutaneous cysticercosis is very rare in the neck

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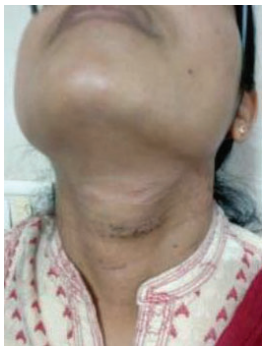

Figure-1: Photograph of cystic swelling in front of the neck.

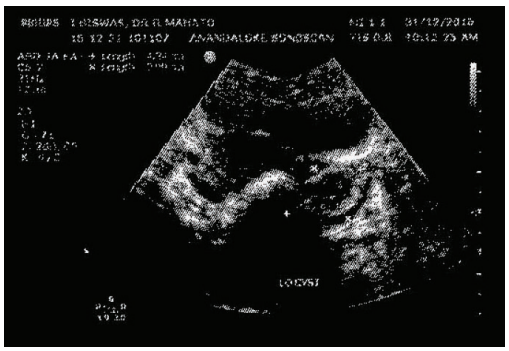

Figure-2: Ultrasonography of neck : Suggestive of thyroglossal cyst.

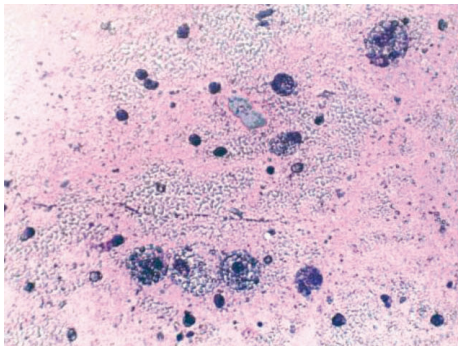

Figure-3: Microphotograph of FNAC smear shows plenty of macrophages and scattered lymphocytes in a mucinous background (MGG X 400). Diagnosis on FNAC: Consistent with benign mucous cyst.

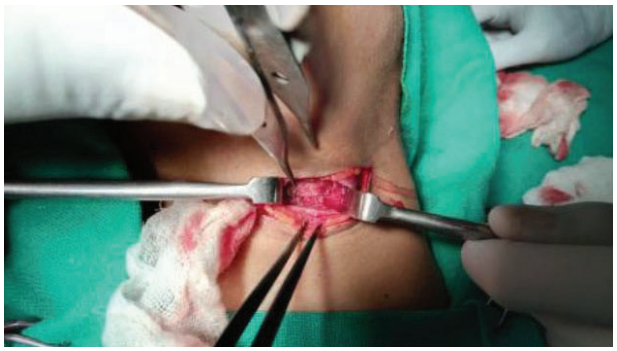

Figure-4: Per-operative photograph of cystic swelling in the neck

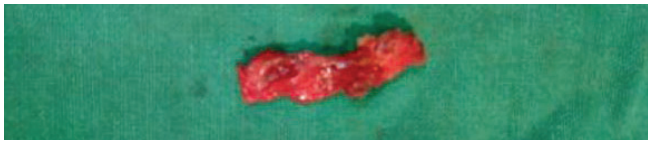

Figure-5: Photograph of surgically removed ruptured cyst from neck.

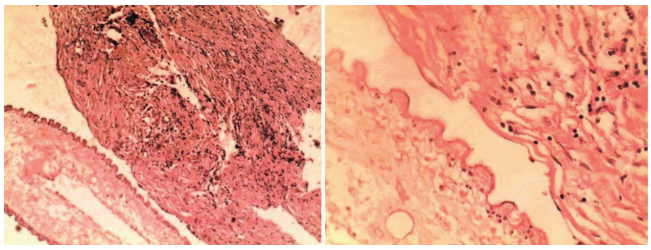

Figure-6: Microphotograph of histopathology of Cysticercous cellulosae along with chronic inflammatory cell infiltrate in surrounding fibrous tissue (H & E X 100); **Figure-7:** Microphotograph of histopathologically section shows trilaminated corrugated chitinous cell wall of Cysticercous cellulosae with chronic inflammatory cell infiltrate in surrounding fibrous tissue (H & E X 400)

region, as a whole it is common in Asia and Africa in relation to other subcutaneous sites of the body. Histopathological examination or FNAC helps to confirm the diagnosis of cysticercosis.[4,9]

CONCLUSION

The importance of this case report lies not only in its extremely uncommon site of presentation but also emphasize the value of histopathological examination to confirm the diagnosis of cysticercosis. On the other hand, the diagnosis of cysticercosis should be considered as a differential diagnosis for a cystic lesion in the neck region, especially in the areas where it is prevalent.

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