Section: ENT

Case Series

ISOLATED CYSTICERCOSIS NOT JUST A BUMP: A CASE SERIES WITH REVIEW OF LITERATURE

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Abstract

Cysticercosis is named after the larval stage of Taenia Solium or Taenia Saginata that is Cysticercus cellulosae. Cysticercosis is a parasitic infection caused by the larval form of Pork Tapeworm "Taenia Solium" and is usually known to affect the central nervous system, subcutaneous tissue, orbit, skeletal muscle with limited involvement of Head and Neck. We present a series of 3 cases with Isolated Cysticercosis Cellulosae. All the swellings should not be treated simply, parasitic etiology should also be kept in mind while dealing with case of head and neck swelling.

INTRODUCTION

The word Cysticercus is derived from the Greek word "Kytis" meaning cyst and "kertos" meaning tail due to its appearance.[1] T. saginata is disturbed worldwide, but it is prevalent more in some parts of Africa, India, China, Southeast Asia and rarely in Europe and North America.[2] Most of the cases of muscular cysticercosis manifest as a painless swelling.[3] It occur due to consumption of undercooked pork as well as through faeco-oral route.[4] Cysticercosis is a preventable disease.
This study present a series of 3 cases with isolated cysticercosis.

CASE SERIES

CASE 1

A 21 year old male patient presented to us with history of painless progressively increasing midline swelling in the anterior two–third of tongue for past 5 months. Except this swelling the patient was otherwise asymptomatic. On intra oral examination a single swelling approximately measuring 2.5 x 2 cm present over dorsum of tongue was seen, which was firm in consistency, non-tender, non-pulsatile with diffuse margins and normal overlying mucosa. There was no restriction in tongue movement and no other similar swelling anywhere else in the body seen.

On Fine Needle Aspiration Cytology: Microbiology- FNAC showed fair number of eosinophils mixed with polymorphs and lymphocytes with amorphous granular material and laminated acellular strips suggestive of inflamed cyst.

Figure 1 Clinical photograph showing a visible lump on the left side of dorsum of tongue(pretreatment)

Figure 2: clinical photograph (post treatment)

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USG Tongue shows well defined heterogeneous lesion, predominantly hypoechoic over left anterior one- third of tongue with peripheral vascularity.
MRI Head was done to exclude presence of cysticercosis in brain and eyes. Patient was pretreated with Tab. Prednisolone 30 mg OD (Once Daily) for 5 days followed by Oral Albendazole 15 mg/ kg and was given for 28 days.

CASE 2

A 12 year old female patient presented to our OPD with painful swelling in the right side of the neck for the past 10 days. Swelling became prominent on moving head to opposite side. On examination swelling was approximately 2 x 1.5 cm moderately tender mass palpable with well-defined margins and free from the overlying skin and not fixed to underlying structures. The swelling was soft to firm in consistency with well-defined margin and no local rise of temperature. From proper history and clinical examination various differential diagnosis were kept in mind probably tuberculosis of neck node, chronic suppurative lymphadenitis and secondaries in neck.
On USG of the neck, a well-defined anaechoic cystic lesion of size 2 x1 cm with a hyperechoic focus (scolex) within the substance of right Sternocleidomastoid muscle was reported

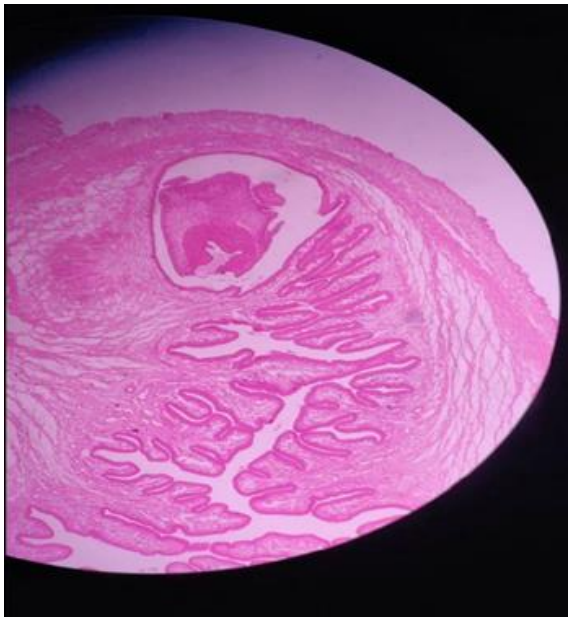

Figure 3: Histopathology revealed a parasite with irregularly shaped membranous foldings and scolices representing Cysticercus larva in subcutaneous tissue.

With USG, FNAC we came to a diagnosis of Isolated Cysticercosis Cellulosae of Sternocleidomastoid Muscle. From proper history including diet of the patient and similar swelling anywhere else in the body we cut short many of the differential diagnosis what we have kept in mind. We have started our patient on Tab Albendazole 400 mg BD (two times a day) for 30 days. Tab Prednisolone was added to reduce the swelling. Our patient showed improvement in symptoms and size of the swelling also reduced drastically. Patient was kept in weekly follow up. After 1.5 month repeated USG showed mild oedema in upper part of sternocleidomastoid muscle and complete resolution of the swelling. Further follow up at 3 month and 6 month showed no evidence of recurrence.

CASE 3

A 20 year male patient came to our ENT OPD with a symptomless swelling on the dorsal aspect of anterior two third of tongue on the right side. The swelling was present from past 4 months. On examination swelling was approximately 1.5 cm x 2 cm, firm non tender immobile swelling present on the right anterior two third of the tongue. On Fine Needle Aspiration cytology showed inflammatory cells with significant eosinophils, occasional giant cells and a granuloma suggestive of infected parasitic cyst was made. Patient received Oral Albendazole 15 mg/kg for 1month along with a short course of oral prednisolone. Regular follow up was done to look for recurrence.

DISCUSSION

Cysticercosis is an infection caused by the encysted or larval stage of T. solium called cysticercus cellulosae. Humans are the definite host, while pigs and humans can serve as intermediate host. Adult worm consists of scolex and proglottids. Each proglottid contain 40,000-60,000 eggs which are released in faeces. Pigs get infected by ingesting eggs from ground contaminated by human faeces.[5]
Mode of transmission- consumption of faecally contaminated food and water or by consumption of undercooked pork. The occurrence of this parasitic infection is also related to porcine farming in the rural and urban areas of south India.[6] A study conducted showed porcine blood samples were found to be positive for Cysticercal antigens and antibodies. After consumption, the gastric secretions destroy the larval wall and release the oncospheres and these larvae can penetrate the intestinal walls, enter potal venous system and reach distant sites.[7]

The clinical presentation of cysticercosis can be neural and extra-neural. The cysticercus larva most commonly affects the central nervous system, subcutaneous tissue and muscles.[8] Least common locations are heart, liver, lung and peritoneum. In muscular form three types have been defined the myalgic type the mass -like, pseudo-tumour or abscess-like type, and the rare pseudohypertrophic type.[9] The clinical manifestation can occur in two phases, the acute invasion phase, presents with fever, muscle tenderness and eosinophilia and the chronic phase presents with muscle stiffness, pain and swelling due to high larval load in muscle.[10]
Most of the case reports suggest muscular cysticercosis presents as a painless swelling but one of our 3 patients presented with a painful swelling.
Definitive confirmation can only be made by demonstration of cysticercus cellulosae on

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histopathology. Brown et al. suggested histopathology as the only reliable method for confirming the diagnosis of cysticercosis. Even preoperatively Fine needle aspiration cytology can make diagnosis in 45-100% of the cases. Pearly white content representing larval fragments in inflammatory background, are included in the aspirate.[11] CT and MRI are of great value in diagnosing neuro cysticercosis.[12] Immunodetection of cysticercosis can be achieved in sera, cerebrospinal fluid and saliva using Enzyme Linked Immunosorbent assay (ELISA) or Enzyme Linked Immunoelectrotransfer Blot (ELIB).[13]

Treatment of cysticercosis depends upon the site, clinical symptoms. Surgical treatment is recommended for symptomatic, localized lesions and medical management for neurocysticercosis and subcutaneous cysticercosis.[14] Praziquantel (50mg/kg/day) and albendazole(15mg/kg/day) are the drug of choice for treatment of cysticercosis.[15] Sekhar and Honavar suggested combination of oral albendazole and prednisolone in the management of myocysticercosis.[16]

CONCLUSION

Cysticercosis is a preventable disease. The most common cause of disease is eating undercooked pork. So providing a good awareness about spread of disease is necessary.

REFERENCES

1. Bhandary S, Singh R, Karki P, SinhaAK.Cysticercosis of tongue- diagnostic dilemma.Pac Public Health 2004;11:87-88
2. Prabhu SR (1992) Oral diseases in tropics. Oxford UniversityPress, Oxford, pp 126–129
3. Timosca G, Gravilita L (1974) Cysticercosis of maxillofacialregion. Oral Surg Oral Med Oral Pathol 37:390–400
4. SaranRK,RattanV,Rajwanshi A et al (1998) Cysticercosis of the oral cavity:report of five cases and a review of literature.Int J Paediatr Dent8:273-278
5. Elias FM, Martins MT, Foronda R et al (2005) Oral cysticercosis: case report and review of the literature. Rev Inst Med Trop Sao Paulo 47:95–98. https://doi.org/10.1590/s0036-46652005000 200007
6. Mohan VR,TharmalingamJ,MuliyilJ,etal.Prevalence of porcine cysticercosis in Vellore, South India.TraNS R Soc Trop Med Hyg 2013;107:62-4
7. Ramraje S,Bhatia V ,Goel.A.Solitary intramuscular cysticercosis-A report of two cases Australas Med J 2011;1:1-8
8. TRicha Ray J, Pattanayak S, Vibha(2012) An asymptomatic tongue nodule. ContempClin Dent 3:464.https://doi.org/10.4103/0976-237x.107441
9. RameshV.Cysticercosis.Int J Dermatol 1984;23:348-50
10. McGILLRJ.Cysticercosis resembling myopathy.Lancet 1948;2:728-30
11. Delgado-Azan˜ero WA, Mosqueda-Taylor A, Carlos-Bregni R et al (2007) Oral cysticercosis: a collaborative study of 16 cases. Oral Surg Oral Med Oral Pathol Oral RadiolEndodontol 103:528–533. https://doi.org/10.1016/j.tripleo.2006.01.022
12. Lustmann J, Copelyn M (1981) Oral cysticercosis. Review of the literature and report of 2 cases. Int J Oral Surg 10:371–375
13. Flisser A, Plancarte A, Correa D et al (1990) New approaches in the diagnosis of Taeniasoliumcysticercosis and taeniasis. Ann Parasitol Hum Comp 65(Suppl 1):95–98. https://doi.org/10.1051/ parasite/1990651095
14. Singh A, Gautam P, Handa AC, Handa KK (2018) Oral cysticercosis: a case series and review of literature. J Oral MaxillofacSurg 76:2572–2576. https://doi.org/10.1016/j.joms.2018.07.012
15. Takayanagui OM, Chimelli L (1998) Disseminated muscularcysticercosis with myositis induced by praziquantel therapy. Am J Trop Med Hyg 59(6):1002–1003
16. Sekhar GC, Honavar SG (1999) Myocysticercosis: experience withimaging, therapy. Ophthalmology 106(12):2336–2340

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