



ORIGINAL RESEARCH PAPER

Otorhinolaryngology

A RARE OCCURRENCE OF HYDATID CYST OF RIGHT SUBMANDIBULAR GLAND : A CASE REPORT

KEY WORDS:

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ABSTRACT

Introduction: Hydatid cyst, commonly reported from the tropics, is caused by *Echinococcus granulosus* or otherwise known as the dog tapeworm. While the hydatid cyst disease is most commonly seen in the liver, here is a case report that includes the occurrence of hydatid cyst in a rather rare site, the submandibular gland. **Case Report:** A 16 years old female presented to the Otorhinolaryngology OPD in Sanjay Gandhi Memorial Hospital, Rewa with chief complain of a swelling in the right side neck, which was gradually increasing in size over last 5 years. Thorough clinical, cytological and radiological investigations led to the swelling being diagnosed as a hydatid cyst. **Discussion:** After the diagnosis was made the patient was checked for any other potential site for cyst formation throughout the body. The patient was taken for surgery. The right submandibular gland along with its duct was removed and was sent for histopathological examination. The diagnosis was confirmed to be a case of hydatid cyst. **Result And Conclusion:** The overall prognosis was excellent after the surgery. The patient was discharged with 2 months course of antihelminthic drug treatment with tablet Albendazole 400 mg after food once daily.

INTRODUCTION

Hydatid cyst is a globally distributed disease; commonly reported in Asia or the tropics. It is caused by a parasite named *echinococcus granulosus* or commonly known as the dog tape worm. It is rarely also due to the parasite *echinococcus multilocularis*.

The name dog tapeworm comes from the dogs being the definitive hosts for these parasite's life cycle. Humans are accidental intermediate dead end hosts. Other intermediate hosts being, horses, cattles and sheeps. The adult worms reach the small intestine of the dog and the eggs are passed in the faeces. These eggs being highly resistant to extreme environmental conditions, survive for a long period of time. The protoscolices develop into adult worms after the cyst wall is digested in the dog intestine. If there is any history of close contamination with an infected dog the ovum gains entry into the human gastrointestinal tract.

CASE REPORT

A 16 years old female came to the Otorhinolaryngology OPD of Sanjay Gandhi Memorial Hospital, Rewa with chief complain of a swelling in the right upper part of the neck for last 5 years. There was no history of fever, difficulty in swallowing or any other systemic complains. The swelling was insidious in onset, was approximately of a size of a marble, gradually increased in size to attain the present size of 3*3 cm in the right submandibular region. The swelling site was devoid of any engorged veins, skin pigmentation, visible pulsation or any scar marks from previous surgeries or injuries. On palpation, it was a well defined swelling of spherical shape measuring, 3*3 cm in the right submandibular region. It had smooth surface, soft in consistency and it was also fluctuant presenting like a typical cystic neck swellings.

On doing an ultrasonogram of the neck, a complex appearing hypoechoic cystic lesion in the right submandibular gland showing collapsing, curvilinear inner membrane like structure and no internal vascularity, ? degenerating hydatid cyst. The swelling was found to be a hydatid cyst, which was

further confirmed by thorough histopathological examination after excision of the cyst postoperatively.

DISCUSSION

Theoretically hydatid cyst disease can be found anywhere in the body. The commonest sites being the liver and the lungs. Rarely it has been reported in organs like bone, brain, eye, heart, kidney, adrenals, spleen and parotid gland(1,2). The parasite eggs after hatching, pass into the portal venous system or lymphatic system then they reach the liver and lungs forming the hydatid cyst lesions. Occasionally, they cross the hepatic sinusoids or pulmonary capillary barriers getting into the systemic circulation hence settling in all the organs and structures in the body (3,4).

Infection occurs while being in close contacts with dogs, cats those have the tapeworm, cause the eggs cling to their fur. Since the distribution is limited only by blood flow and filtration hence the larvae can invade any organ(5)

With neck being in the picture here, it's a rather unusual site even in the endemic areas and has its own share of diagnostic difficulties because of the presence of other wide ranges of cystic lesions in the neck(6). It usually mimics a slow growing tumor, an abscess, a sebaceous cyst, or sometimes also some congenital cysts. When it is usually asymptomatic, it may get complicated if any local infection sets in, resulting in rupture of the cyst which might end up being anaphylactic shock and hence a medical as well as surgical emergency. The local symptoms pertaining to the cyst are mainly due to, its gradual increase in size exerting pressure over its surrounding structures. Reportedly, the neck hydatid cysts are 1% of the total hydatid cysts that have been reported till date(3,7).

In this particular case ultrasonogram being the investigation of choice helped in appreciating the features such as hypoechoicity, cystic lesion with collapsing curvilinear inner membrane like structure with no internal vascularity. Ultrasonogram offers a sensitivity and specificity of 90-95% in diagnosing this condition(9).

Serodiagnoses even though could lead us towards the diagnosis, it could not be done because of the reported false positives and negatives. However the eosinophil count was high and was found to be 12%.

To further check for the other potential sites of the hydatid cyst, contrast enhanced CT scan of the whole abdomen and HRCT chest was done.

Fine Needle Aspiration Cytology (FNAC) attempt yielded 1.5 ml serous fluid.

Microscopy : Smears examined show scolices and at places hooklet of *echinococcus granulosus* in a proteinaceous background.

For attaining complete cure from the disease surgical treatment is always preferred over medical especially in the case of these neck hydatid cysts(9). Total pericystectomy in which the whole of the cyst along with its cyst wall remains the mainstay of the treatment(8). In this case safe removal of the right mandibular gland was done. On gross examination the submandibular gland showed multiple whitish fluid filled cystic masses within the gland.

The gland was then sent for the histopathological examination which finally, to our reassurance confirmed the lesion to be a hydatid cyst of the submandibular gland.

The patient was then discharged with a course of tab. Albendazole 400mg, after food, once daily for two months to reduce any further infection after taking complete wound care and suture removal after wound healing.

CONCLUSION

Hydatid cyst disease of submandibular gland even though a rare occurrence can be treated by prompt treatment, proper surgery by expert hands with anti spillage measures and careful dissection. Surgical treatment has provided the patient with an excellent prognosis and antihelminthic treatment should be continued to minimize any residual disease focus. With proper follow up and a serial ultrasonogram a month after can ensure complete cure. The patient should also be warned regarding the risks of further infection and is instructed to maintain proper hand hygiene while dealing with infected animals.

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