CASE REPORT

Hydatid Cyst in the Neck – an unusual presentation

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ABSTRACT

Hydatid cyst in the head and neck is very rare. We present an unusual case of a hydatid cyst found in the neck under the sternomastoid muscle going deep down to the superior mediastinum. The diagnosis of hydatid cyst is made mainly with the help of imaging methods and review of the patient's history. Serologic tests can also be useful. The diagnostic use of fine-needle aspiration biopsy generally has not been advised because of the potential to precipitate acute anaphylaxis or to spread daughter cysts. Treatment is surgical. Postoperative albendazole therapy is suggested especially when there is preoperative contamination risk. The location of the lesion, diagnostic problems and therapeutic approach are discussed. Review of literature is also presented.

Key words: Cyst, Hydatid, Neck.

INTRODUCTION

Echinococcal parasites are members of the order Cestoda (flatworms) and the family Taenia. The propensity for these organisms to cause infection in pastoral and other rural setting is best explained by their life cycle, the adult form of echinococcus is a 5mm long hermaphroditic tapeworm which infests the small intestine of carnivorous animals, such as cows, sheep, buffaloes, zebra, moose and caribou. In the duodenum, enzymatic digestion of the eggshell releases embryonic forms of the organism, which then pass through the mucosa of the small intestine and enter the portal circulation. Once filtered by the liver or the lung the embryo transforms into a microscopic larval stage, the protoscolex or scolex, which is capable of multiplying asexually within the affected organ. "When the host animal dies or is slaughtered, ingestion of organs infested with larva completes the life cycle & the larva mature into adult parasites within the small intestine of the carnivore.

Man is an accidental, intermediate host in the echinococcal life cycle, as infection of human beings represents a terminal event for the parasite. Typically, man is exposed to the organism by ingestion of contaminated vegetables, or meat, which cannot be washed or scrubbed free of eggs. Infection may also occur when playing with dogs harbouring the tapeworm, as eggs cling to their fur. This is the most common means by which children acquire the disease. The larval form of echinococcus can invade any organ system, and the distribution of infection is limited only by blood flow and filtration. Thus, hydatid cyst can occur in the liver, spleen, lungs, brain, muscle, and even bone. In humans, approximately 65% to 75% of hydatid cysts occur in the liver, 25% are found in the lungs, and 5% to 10% distribute along the peripheral arterial system.

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CASE REPORT

A 20 year young male good health presented, with a slowly progressing non tender swelling on (L) side of neck, more prominent for last1year duration. Small size of swelling was present 4 to 5 years but increases with passage of time slowly and gradually. He took medicine antibiotic from general practionar but not relived of symptoms. The swelling was not associated with symptoms like pain, dysphagia, odynophagia, hoarseness of voice or weight loss etc. the only symptom was gradually enlarging mass (L) side of neck. There was no other swelling in any other part of the body. GPE was normal, on local examination there was a non tender swelling extending above from the middle of the neck about 3 fingers below the mandible, medially from medial border of the sternomastoid upto the lateral border of sternomastoid laterally. The swelling was about 8x6cm, smooth in surface and firm in consistency, upper, medial and lateral edges were palpable whereas the lower edge was not palpable on the posterior aspect of sternomastoid muscle as it was going under the clavicle and diffuse in nature. The swelling did not move with deglutition or protrusion of tongue. Skin overlying the swelling was free and it was not a pulsatile swelling. As shown in figure.1

Routine haemogram, x-ray chest and USG abdomen was within normal limits. The expertise of FNAC was not available so that was not advised. USG repotted as thyroid gland was normal in position ,multiple cystic masses of variable sizes ,largest 5x5x6 cm capsule was thick wavy in out lining , on color droppler benign pockets of collection no communication with blood vessels. Great vessels are pushed medially. CT scan with contrast was done, which was reported as non enhancing mass (L) side of neck along the boarder of sternomastoid muscle going in to (L) superior mediastinum. As shown in figure.2

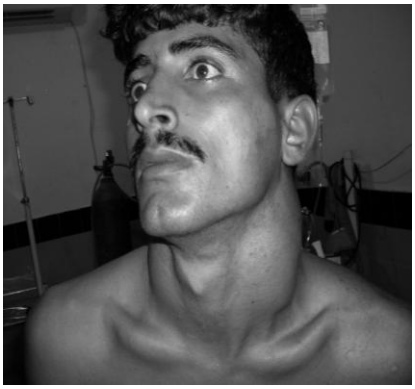

Fig. 1

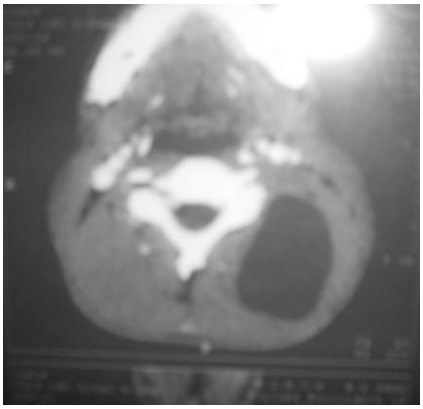

Fig: 2(a) = axial view of CT scan neck.

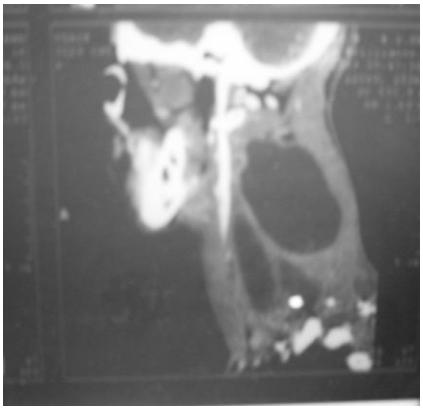

Fig: 2 (b) = segetal view of CT scan neck.

The neck mass was approached by using a cryl's (y) shape neck skin crease incision on (L) side. Skin flap was raised to get complete exposure, sternomastoid muscle was retracted and because of large fibers had to be cut. There was two separate swelling which were identified after exposing, first swelling was shinning white cyst wall found, which is present below the (L) sternomastoid adherent to the surrounding muscle sheath, completely mobilized slowly with gauze peanuts to avoid spillage of cystic contents and removed successfully. Second cyst was going deep under the sternomastoid even below the clavicle into the superior mediastinum, there was also same problem of adherence of the cystic wall with the fibrous band felt to be attached from the transverse process of cervical vertebrae. Blunt dissection was done and mobilization of the cyst was done. These masses were lobulated and excised in toto as shown in figure.3 and were submitted for a histopathological diagnosis. Haemostais was secured. Muscle fibers were repaired using vicral 3/0 the wound was closed in layers after placing redivac drain and dressing applied. Typical hydatid cyst along with hundreds of foamy daughter cyst enclosed within these two identified cysts were found and sent for HPE as shown in figure.3 (a) which confirmed the diagnosis and finally repotted after one week. Post-operative period was uneventful.

Fig: 3(a): Daughter Cysts

Fig: 3(b) Hydatid Cyst Wall

One the first post operative day no neurological sequalae was noted. Wound was fine and drain had 50ml of serosanguinous fluid. The drain was removed on the 2nd post op day. Patient was discharge 3rd post op day; first follow-up was made after 7th day. Wound was fine stitch were removed. As shown in figure.5, the histopathological report labeled the specimen to be as hydatid cyst. Post operative albendazole was started and given for 2 weeks , to avoid the risk of

intera operative contamination .

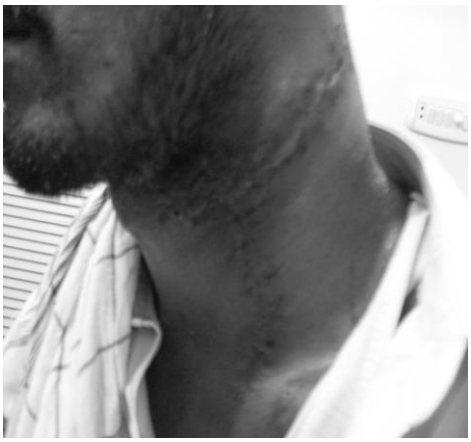

Fig. 5

IgG serology for hydatid cyst was advised postoperatively as there was no suspicion of hydatid disease preoperatively. It was reported positive with the reading of 1.4.

DISCUSSION

The diagnosis of echinococcosis (echinococcus granulosus) in an atypical location can be difficult to make and frequently can only be established by histological examination of affected tissues. Surgical excision and fine needle aspiration biopsy usually lead to the diagnosis. Since puncture of these cysts may lead to an anaphylactic reaction due to spillage of hydatid fluid and/or dissemination of infection, the use of fine needle aspiration is controversial at present.

Knoch et al (1999)[1] reported a patient with a cystic neck mass who developed an allergic reaction after diagnostic fine needle aspiration biopsy, cytological examination of the specimen was inconclusive, the allergic reaction led to the diagnosis of echinococcosis, which was confirmed by the serological examination.

Eroglu E et al (1999)[2] reported cysts in the cervicofacial region which is rare. They presented an unusual case of a hydatid cyst found in the nape of a 66 year old Turkish woman. There was no pulmonary or hepatic involvement.

Cossu ML et al (1999)[3] reported an expansive mass in the anterior cervical region (front of neck) with abscess in 54 year old lady. Laboratory tests and thyroid profile proved normal. Surgical exploration revealed a hydatid cyst in the left lobe of thyroid gland with parasitic metasis of the left lateral cervical lymph node chain. Post operative examination of the nodule showed it to be a solitary primary thyroid hydatid cyst.

Passaglu E et al (1998)[4] reported CT findings of hydatid cyst with unusual location in infratempopral fossa in a 9 year old male patient suffering from a swelling of the left maxillary region which was diagnosed by CT. The lesion visualized on CT images was compressing the neighboring structures. The possible diagnosis was based on the images obtained from CT examination.

Gbouri et al (1997)[3] gave an account of a cervicofacial hydatid dissemination case provoked by iterative ponctions of hydatid cyst initially isolated in the left maxillary sinus. They insist on the role that must be played by immunological tests in diagnostic approach and treatment monitoring of this disease which is unfortunately current and serious.

Gangopadhyay K et al (1996)[6] reported an unusual location of hydatid disease in the pterygopalatine fossa- infra temporalfossa.

Laraqui NZ et al (1995)[7] reported on a case of a cervicofacial hydatid cyst revealed by an isolated subangulomaxillary tumefaction. They stressed the scarcity of this localization, the definitive diagnosis of which is obtained only with an exploratory and curative cervicotomy.

Sennaraglu L et al (1994)' reported an unusual location for hydatid disease in the infratempopral fossa.

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