International Journal of Research and Review
Vol.7; Issue: 8; August 2020
Website: www.ijrrjournal.com
Case Report *E-ISSN: 2349-9788; P-ISSN: 2454-2237*

Hydatid Cyst in Submental Region of Neck: A Rare Case

Madhuri Dadwal[1], Shaweta[2], Richa Gupta[3]

[1]Associate Professor, Department of ENT-HNS, Indira Gandhi Medical College, Shimla, H.P.
[2]Senior Resident, Department of ENT-HNS, [3]Senior Resident, Department of Pathology,
Shri Lal Bahadur Shastri Government Medical College, Mandi at Nerchowk, H.P.

Corresponding Author: Shaweta

ABSTRACT

Hydatid cyst or Echinococcosis is a zoonotic parasitic disease caused by tapeworm that occurs primarily in sheep grazing areas, but it is common worldwide because dog is a definitive host. Hydatid disease is most frequently caused by E. granulosus and commonly affected organs are liver and lung. It is a chronic disease and cyst can be localized in different organs. A high index of suspicion is required to diagnose it in the unusual region and non endemic areas. Incidence of hydatid cyst in head and neck region is extremely rare. We report a case of 55 year old male who presented with a swelling in submental region of neck. Through this case report we emphasize that the rarely seen pathology must be kept in mind in the differential diagnosis of swelling in neck region.

Keywords: Hydatid Cyst, Neck, Echinococcus, Albendazole

INTRODUCTION

Hydatid disease is caused by tapeworm Echinococcus granulosis. [1] Most frequently involved organ is liver (hepatic sinusoids). Sometimes ova may pass through the liver and reach the general circulation to lodge in orbit, heart, lung, bladder and other internal organs. Hydatid cysts in neck are extremely rare, even in geographical areas in which echinococcal infestation is frequent. [2]

CASE REPORT

A 55 years old male presented in our outdoor patient department with complaints of swelling in neck below chin (submental region) for 1 year. It was insidious in onset, slowly progressive and not associated with fever or history of trauma. Patient's personal history revealed the close proximity with cattle.

On local examination of submental triangle of neck, a swelling of size 5x4 cm was present in the submental triangle of neck, soft in consistency, non-tender, with no local signs of inflammatory response.

Chest radiograph, USG abdomen, blood & urine analysis were normal. Ultrasonography (US) revealed a heterogenous mass of size 5*4 cm in submental region. Echogenic as well as anechoic areas were seen. Multiple well defined cysts were seen with peripheral calcifications. Margins were well-defined. Possibility of minor salivary gland tumour was kept. Contrast enhanced computed tomography of neck (CECT-Neck) was suggestive of an oval well-defined lesion of 3.9×3.7 cm with thick septae with cranio-caudal extent of 4.5cm in submental region and right sublingual region. The lesion showed curvilinear hyperdense membrane and multiple round more hypodense areas in between largest measuring10x6.6mm abutting both anterior belly of digastric muscle and pushing them laterally. Superiorly abutting mylohyoid muscle inferiorly causing bulge. No extension to skin surface. Possibilities of Ranula with superadded infection and Muco-epidermoid

tumour of minor salivary gland were kept. (Figure 1, 2).

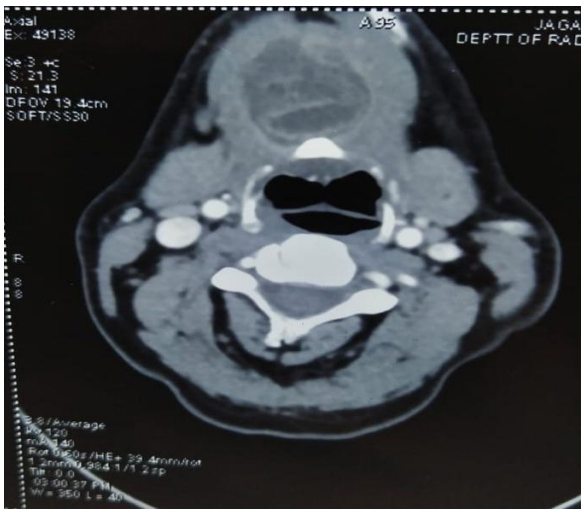

Figure 1: Axial computed tomography (CT) scan shows an oval well-defined lesion with thick septae with cranio-caudal extent of 4.5cm in submental region and right sublingual region. The lesion showed curvilinear hyperdense membrane and multiple round more hypodense areas in between.

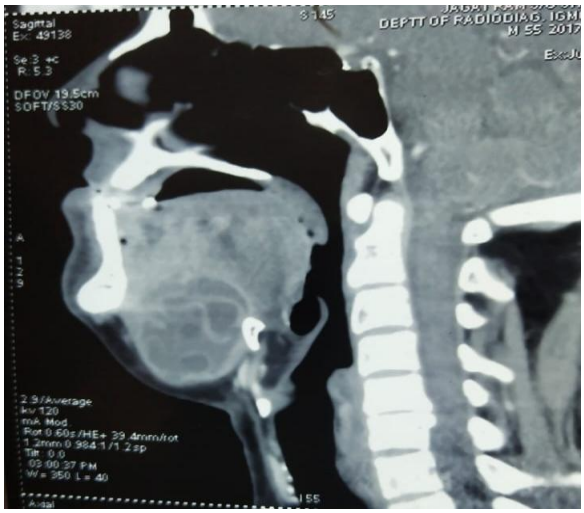

Figure 2: Sagittal computed tomography (CT) scan

The cyst was removed surgically by pericystectomy. Intra operatively there was a 5x4 cm cyst in submental region, multiple variable sized daughter cysts were also present (Fig. 3,4). There was no spillage of cyst fluid into the surrounding areas. Following irrigation of cystic cavity with hypertonic saline solution a suction drain was placed in situ and his post operative course was uneventful. Patient was discharged on Albendazole 400 mg twice daily orally for three months.

Figure 3A view of the resected cyst with daughter cysts.

Figure 4 Showing daughter cyst

Histopathological examination demonstrated lamellated ectocyst surrounded by pericyst comprising of chronic inflammatory cells and occasional foreign body type giant cells along with necrosis confirming hydatid cyst. (Figure 5)

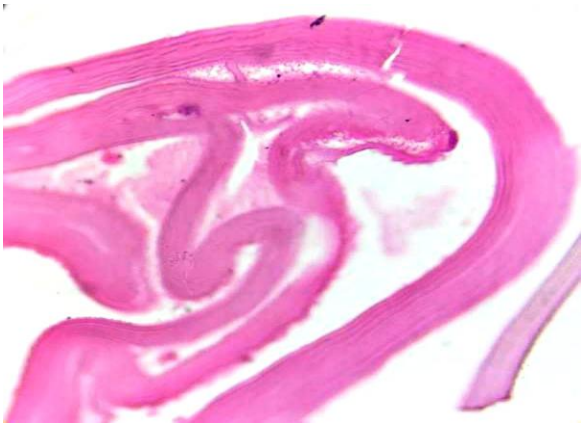

Figure 5 Showing histopathological examination of Hydatid cyst.

The case followed up for 6 months and there was no recurrence.

DISCUSSION

Echinococcus granulosus is a parasite which causes hydatid disease. Most frequently involved organ is liver, a few ova may pass through the liver, heart, and pulmonary capillaries and reach the general circulation to lodge in such sites like orbit, bones, and other internal organs. Hydatid cysts located in the head and neck region are extremely rare, even in geographic areas in which echinococcal infestation is frequent. [2]

The life cycle of this tapeworm involves definitive and intermediate host. Echinococcus granulosus resides in the jejunum of dog which is the definitive host and produces eggs that are trapped in stool. Then eggs are expelled out in feces and are released to environment. These are infective to intermediate host (Sheep) and accidentally to humans. After ingestion of eggs through the ingestion of contaminated fruits or vegetables, digestive enzyme liberates an embryo in duodenum. Embryo passes through intestinal mucosa to portal circulation and migrates to visceral organs. Liver filters out most of the larvae, hence most cysts occur in liver. [3]

Patients with echinococcus infestation must undergo thorough systemic investigations because 20-30% have multiorgan involvement. Hydatid cysts i neck, in the absence of disease in lung and liver, may be due to systemic dissemination through lymphatic route. Lymphatic spread is a strong possibility in case of unusual presentation sites. The majority of hydatid cysts are asymptomatic and symptoms depend upon location, size and pressure caused by enlarging cyst. [4]

Hydatidosis is diagnosed by the patient's history, physical examination findings, radiologic imaging modalities, and serological tests. Although imaging methods give nonspecific findings, they may be helpful for making the diagnosis. As in our case, the diagnosis was missed in the CT scan of the neck and the mass was reported as a simple cystic structure. Abdominal and chest X- rays, ultrasound and CT scans should be performed in order to investigate various organ involvements, particularly liver and lungs. [5]

To confirm the diagnosis histopathology was done after surgical excision.

The best treatment option is total surgical excision without opening the cyst. If the cyst cannot be excised without opening, the fluid contents should be removed and the laminated membrane should be totally excised. The cyst pouch should be irrigated with protoscolicidal solutions. Subcutaneous cysts are more prone to rupture since they are not diagnosed pre operatively. Medical treatment with antihelmintic drugs, such as mebendazole and albendazole, should be included especially for disseminated, inaccessible hydatidosis and for patients who do not favor the morbidity of an operative process. These drugs may also play an important role in conjunction with surgery, both preoperatively for sterilization of the cyst and postoperatively in case of spillage. [6] Histopathologically our case demonstrates lamellated, chitinous, acellular and thick ectocyst along with pericyst showing surrounding host reaction which is chronic inflammatory cells infiltrate, foreign body type of giant cells and necrosis thus confirms the diagnosis of hydatid cyst.

CONCLUSION

Hydatid cyst rarely appears in the neck but it should be considered in the differential diagnosis of lesions causing slow-growing cystic swelling of the neck. During surgical removal of cysts great care must be taken to avoid spilling of the cystic contents. Histopathological examination of surgical specimen and patient follow up seems critical in all cases in order to offer accurate diagnosis and definitive treatment and to prevent recurrence.

Conflict of interest: None declared

REFERENCES

1. Polat, Pınar, and S Selçuk Atamanalp. "Hepatic hydatid disease: radiographics findings." *The Eurasian journal of medicine* vol. 41,1 (2009): 49-55.
2. Hirani N, Khilnani AK, Lanjewar D, Patel N, Solanki V, Bhadesia B. A rare case of primary hydatid cyst of neck. Int J Otorhinolaryngol Head Neck Surg 2019;5: 178-80.
3. Akal M, Kera M. Primary hydatid cyst of the posterior cervical triangle. J Laryngol Otol 2002; 116:153-155.
4. Jarboui S, Hlel A, Daghfous A, Lepandru A (2012) Unusual Location of Primary Hydatid Cyst: Soft Tissue Mass in the Supraclavicular Region of the Neck. J Clin Case Rep 2:151
5. Katilmis H, Ozturkcan S, Ozdemir I, Adadan Guvenc I, Ozturan S: Primary hydatid cyst of the neck. *Am JOtolaryngol* 2007, 28:205–207.
6. Michail OP, Georgiou C, Michail PO, Felekouras E, Karavokyros I, Marinos G, Giannopoulos A, Griniatsos J. Disappearance of recurrent intra-abdominal extrahepatic hydatid cyst following oral albendazole administration. West Indian Med J 2007; 56(4):16-21.

How to cite this article: Dadwal M, Shaweta, Gupta R. Hydatid cyst in submental region of neck: a rare case. International Journal of Research and Review. 2020; 7(8): 149-152.

******