International Journal of Medical Science in Clinical Research and Review
Online ISSN: 2581-8945
Available Online at http://www.ijmscrr.in Volume 3|Issue 01 (January-February) |2020 Page: 16-19

Case Report

Imaging Management of a Hydatid Cyst in the ENT Sphere: A Detailed Case Report

Authors:
Radia Benyahia[1], Samir Benyahia[2], Amine Saaoui[3], Lyes Rahal[4]
[1]*Radiology Department, Pierre and Marie Curie Center, University of Algiers 1, Algeria.*
[2]*ENT Department CHU Mustapha, Algiers, Algiers 1 University, Algeria.*
[3]*Department of Thoracic and Cardiovascular Surgery, Bab El Oued University Hospital, Algiers*
[4]*General Surgery Department, Douéra University Hospital, Algiers*
Corresponding Author:
Radia Benyahia, University of Algiers 1, Faculty of Medicine, Algiers1 University Hospital Center, Pierre and Marie Curie Mustapha Hospital, Radiology and Medical Imaging Department, Algiers Algeria

Article Received: 02-January-2020, Revised: 21-January-2020, Accepted: 11-February-2020

ABSTRACT:
Occurrence of hydatid cyst in the face is rare. We report the case of a 24-year old male with a slow growing swelling in the floor of the mouth. The patient's history revealed chest drainage for a ruptured pulmonary abcess, 04 years ago, without documented bacteriological diagnosis. Clinical examination found a non-inflammatory and encapsuled swelling lifting the tongue without adenopathy. MRI scan showed a well-encapsuled multivesicular cyst (05 X 04 cm). Needle aspiration for cytology and hydatid serology were inconclusive. Complete blood count (CBC) and chest radiography revealed no abnormality. The cyst was entirely removed, histopathological examination conclusion was compatible to hydatid disease, wich confirmed our thoughts regarding the patient's history.

Keywords: Hydatid Cyst, ENT Sphere, cytology

INTRODUCTION:

Hydatid disease, hydatidosis or cystic echinococcosis (WHO) is an anthropozoonosis caused by the dog tapeworm, Echinococcus granulosus (E.G). Human infection occurs through direct or indirect contact with the canid-cattle cycle; the Mediterranean basin constitutes an endemic area. The location can be single or multivisceral, it can, theoretically, be located in all the organs of the human body. The most common locations remain the liver and lung, the "head and neck" location is rare. In this observation, we report a case of hydatid disease with intraoral localization.

OBSERVATION:

Mr M. S., aged 24, originally from and living in Timimoun (southern Algeria) was referred to our service in May 2017 for a chronic mass of the floor of the mouth that had been developing for several years. The study of the history reveals a hospitalization in the pulmonology department of the E.P.H of Adrar for abscess of the ruptured right lung, pyo-pneumothorax and dilatation of the bronchi in September 2013. The patient had benefited from antibiotic treatment and rehabilitation, The cyto-bacteriological study of the pleural puncture was not found. The clinical examination revealed a median mass of the floor of the mouth with a cystic appearance, flexible, non-beating, 05 cm long axis, without erythema without pain and without fistulization. The mobile tongue was repressed with dysphagia to solids, without dyspnea or dysphonia. There was no motor, sensory or sensory impairment of the tongue (fig. 01).

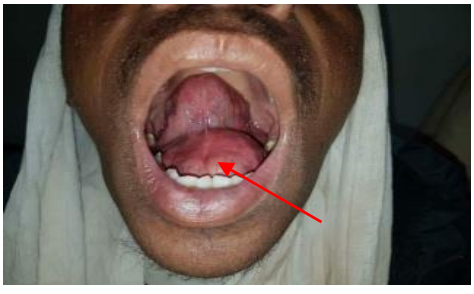

Fig 01: median, chronic non-inflammatory cystic mass of the floor of the mouth in a 24-year-old man.

The examination of the submaxillary glands and Wharton's ducts was without abnormalities, the lymph node areas were free, the rest of the ENT and general examination were without abnormalities. MRI of the face revealed a rounded, homogeneous, liquid, multi-vesicular, sublingual mass with a long axis of 54 mm, surrounded by a thin wall without enhancement suggestive of a hydatid cyst (fig. 02, 03)

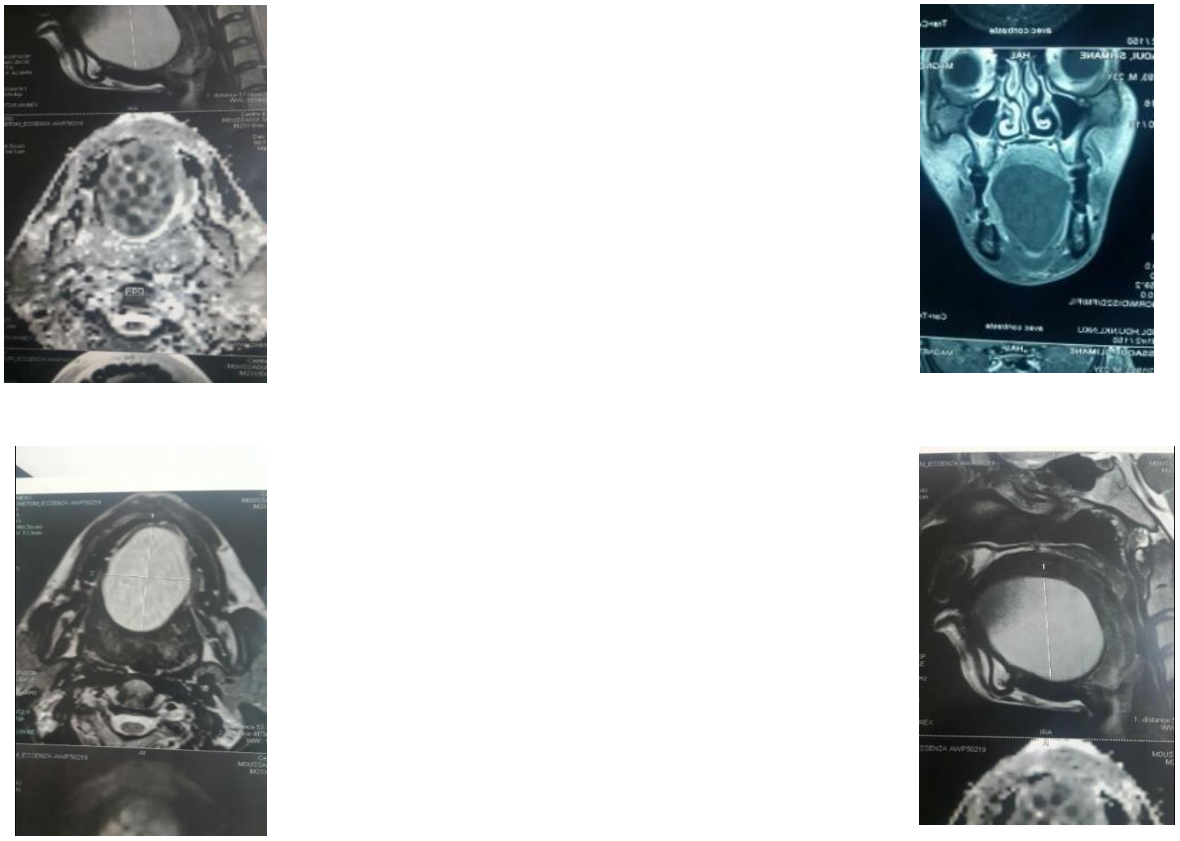

Fig 2 (MRI of the face): a rounded, homogeneous, fluid-filled, multi- vesicular, sublingual mass measuring 54 mm in width, surrounded by a thin wall with no elevation and no infiltration of neighbouring structures, suggestive of a hydatid cyst.

The blood count did not show hypereosinophilia. Fine aspiration of the mass and serology hydatid were negative. Chest CT scan revealed a diffuse interstitial syndrome with dilation of the bronchi with a scar-like appearance. Respiratory functional exploration (EFR) revealed a mixed, predominantly obstructive ventilatory disorder. Abdominal ultrasound was without abnormalities. Surgical excision of the mass was made by vertical midline incision of the floor, the cleavage plane was easily demonstrated, a pericystectomy was done without rupture of the cyst, without washing with hypertonic saline. The intraoperative puncture showed a citrine yellow aqueous liquid (fig 4 + 5). Histological analysis of the specimen confirmed the diagnosis of hydatid cyst. The control after 08 months is satisfactory.

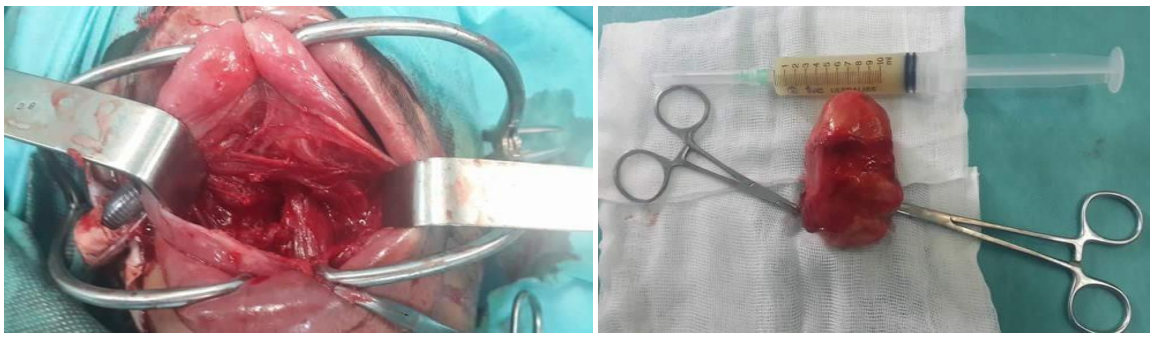

Fig 4: median incision of the mucosa of the floor of the mouth, dissection of the cyst removing the pericyst.

Fig 5: excision of the cyst with pericystectomy, puncture: resulting from aqueous citrine yellow liquid.

DISCUSSION:

Hydatidosis is an anthropozoonosis caused by a metazoan of the genus Echinococcus, granulosus species (E.G) with a cosmopolitan distribution. The infection is prevalent in cattle breeding regions such as China (33 cases / 100,000 inhabitants/year), Latin America (143 cases), Black Africa (220 cases). The Mediterranean basin constitutes an intermediate endemic zone (10 to 14 cases/year/100,000 inhabitants) between Algeria, Tunisia and Morocco (9, 10, 11, 12). Canids (dogs) constitute the reservoir and definitive host of the parasitic cycle, the infesting form (eggs) is expelled in the dog's stools. The intermediate host (cattle) or man (accidental definitive host) is infected by direct contact (with dogs) or indirect (contaminated objects or food) and ingestion of expelled eggs (13, 14). The ingested eggs release their embryos which cross the intestinal barrier to reach the portal venous system, the liver constitutes the first obstacle (60 to 75% of cases). Progression is towards the lung (15 to 30% of cases). Rarely, the embryo crosses these two barriers, embolized into the general circulation, to infest all the other organs (10% of cases) (9, 17). The embryo transforms into larval form (cystic) in the affected organ one month after ingestion, its growth rate depends on the affected organ (01 - 05 cm / year) (13). The organs most affected are the liver (60 to 80% of cases), the lung (25 to 40% of cases) and the spleen (02 to 05% of cases). The cervico-facial location is rare (01 to 02% of cases). Between the years 1967 and 2002, six (06) only cases of submaxillary localization of the hydatid cyst have been reported in the literature (4). Clinically, the condition can remain asymptomatic for a long time. Most often, it is a cystic mass with local compression effect depending on the organ (dyspnea – dysphonia – dysphagia – paralysis). An infectious (abscess) or ummunological (urticaria, anaphylactic shock) syndrome may be observed. As in our observation, the study of the antecedents is fundamental (origin, profession, abdominal, pleuropulmonary or musculoskeletal signs). The blood count formula (FNS) reveals hyper-eosinophilia in 30% of cases (5). MRI plays a key role in suspecting the diagnosis, showing the precise location of the cyst, its type (multilocular, septate), its wall and other locations. The contents of the cyst are in unchanged T1 hyposignal after intravenous injection of contrast product, and in T2 hypersignal. The septa present in hyposignal in T1 and T2 (3). According to new studies, MRI makes it possible to differentiate the parasitic, non-parasitic or traumatic origin of the cystic mass by the "low-signal intensity rim," this rim sign would be pathognomobic for hydatidosis (6). The CT scan reveals a lucid mass well limited by a slightly enhanced border, with peripheral calcifications, uni or multilocular, not enhanced after injection of contrast product, without signs of loco-regional aggressiveness. If the condition is suspected, systemic radiological assessment (TLT, ultrasound) is mandatory. On a biological level, the aspiration puncture can find protoscolex or internal membrane debris, but remains insensitive (false negatives) and dangerous (anaphylactic shock) (1). Hydatid serology remains important, among the different techniques (ELISA, hemmaglutination, latex agglutination, etc.), immuno-electrophoresis is the most sensitive technique (90 – 95%), with positivity up to 1 year after surgery (6) . It constitutes an important monitoring parameter if we consider the drop in diagnostic sensitivity for extrahepatico-pulmonary locations (only 50%) (1). In practice, serological diagnosis must be based on the combination of two techniques, one quantitative and the other qualitative (18). Surgical treatment of the hydatid cyst, with pericystectomy, removal of the residual cavity and washing with Hypertonic Salt Serum is of choice (90% cure). Percutaneous puncture treatment (PAIR) is currently being evaluated (19, 20). Medical treatment, with benzimidazoles (Albendazol) and praziquentel, is indicated for multiple lesions or those presenting a surgical contraindication, it allows the disappearance of the cyst in 30% of cases and a reduction in its size in 50% of cases (20, 21, 22).

CONCLUSION:

The rarity of ENT hydatid localization can lead to diagnostic errors. This pathology should be considered when faced with an asymptomatic cystic mass, especially in endemic areas.

REFERENCES:

1- Parmanand Prasad Pal. Siddharth Shankar. Hydatid cyst in submandibular salivary gland. Indian
J. Otolaryngol. Head Neck Surg. (April–June 2008) 60, 188–190.

2- Somanath B. M., Deepak B., Surianarayana G., Sunil K. S. Hydatid cyst of the maxillary sinus: case report. Clinical Rhinology: An International Journal, May – August 2011; 4(2): 107-109.

3- Mziou Z., Moatemri R., Chelbi M., Omezzine M., Ayachi S., Slama A., Khochtali H. Kyste hydatique du masséter: à propos d'un cas. J. TUN ORL - N° 21 DÉCEMBRE 2008.

4- Onder G., Kayhan O., Yalcın K., Olcay E., Osman A. Submandibular and Intracranial Hydatid Cyst in an Adolescent. The laryngoscope 112; Oct 2002.

5- R. M. Lavanya, V. V. Kamath, Y. Komali, Shruthi K. Hydatid cyst of the buccal mucosa: An unusual presentation. Indian J. of Dentistry; sep 2015; vol 6: issue 3.

6- Alaparthi RK, Yelamanchili S, Nunsavathu PN, Sode U. Intraoral hydatid cyst: A rare case report.

J Indian Acad Oral Med Radiol 2015; 27:457-60.
7- Boussoufara. M, Sallem. R. M, Raucoules-Aime. M. Anesthésie pour chirurgie du kyste hydatique du foie. EMC-Anesthésie Réanimation 2 (2005) 132–14.
8- Tsukarla H, Morishima Y, Nonaka W, Oku Y, Komiya M. Preliminary study of the role of red foxes in Echinococcus multilocularis transmission in the urban area of Sapporo, Japan. Parasitology 2000; 120:423–8.
9- KLOTZ.F, NICOLAS.X, DEBONNE.JM, GARCIA.JF, ANDREU. JM. Kystes hydatiques du foie. Encycl. Méd. Chir. (Editions Scientifiques et Médicales Elsevier SAS, Paris), Hépatologie, 7-023-A-10, 2000, 16 p.
10- Philip S Craig, Donald P McManus, and ALL. Prevention and control of cystic echinococcosis. Lancet Infect Dis 2007; vol 7:p385–394.
11- Develoux M. L'hydatidose en Afrique en 1996 : aspects épidémiologiques. Méd. Trop 1996; 56: 177-183.
12- Chai. JJ. Epidemiological studies on cystic. Echinococcosis in China. A review Biomed. Environ Sci 1995; 8: 122-136.
13- Ammann. RW, Eckert. J. Cestodes. Echinococcus. Gastroenterol.Clin North Am 1996; 25: 655-689.
14- CARMONA.C, PERDROMO.R, CARBO.A, ALVAREZ.C, MONTI.J, GRAUERT.R ET AL. Risk factors associated with human cystic echinococcosis in Florida, Uruguay: results of a mass screening study using ultrasound and serology. Am J Trop Med Hyg 1998; 58: 599-605.
15- O. BOUCHAUD. Parasitoses graves du système nerveux central. Réanimation 13 (2004) 216–225, (Elsevier SAS).
16- Khiati M. Les parasitoses pulmonaires EMC (paris-France), Pédiatrie, 4067A1O ,9-1984,10p.
17- Angulo.JC, Sanchez-Chapado. M, DIiego .A, Escribano .J, Tamayo. JC, Martin L. Renal echinococcosis: clinical study of 34 cases Urol. 1997; 157: 787-794.
18- Khallouki M. Kyste hydatique du poumon chez l'enfant (à propos de 124 cas). Thèse de médecine, rabat, 2001, n°167.
19- WHO INFORMAL WORKING GROUP ON ECHINOCOCCOSIS. Special Meeting on PAIR. Current status in the world as a treatment for cystic echinococcosi and long term results. Proceeding of the XVIII International Congress of Hydatidology, Lisbon, Portugal. Arch Int Hydatid 1997; 32:159-63.
20- Smego. JR. RA, Bhatti. S, Khaliqa. A, BEG.MA. Percutaneous aspirationinjection-reaspiration drainage plus albendazole or mebendazole for hepatic cystic echinococcosis: a meta-analysis. Clin Infect Dis 2003; 37:1073-83.
21- Haouas N, Sahraoui W, Youssef A, Thabet I, Ben Sorba N, Jaidane M, Mosbah A. Kyste hydatique du cordon spermatique. Progrès en Urologie, 2006; 16, 499-501.
22- HORTON.R.J. Albendazole in treatment of human cystic echinococcis : 12 years of experience.
Acta. Trop., 1997, 64, 79-93.