

HYDATID DISEASE OF THE SUBMANDIBULAR GLAND

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ABSTRACT

Echinococcosis is a tissue infection of the human caused by the larval stage of *Echinococcus granulosus* or *E. multilocularis*. Hydatid cyst of the head and neck region is uncommon and involvement of the salivary glands, especially the submandibular gland, is very rare. In this article, a case of submandibular gland hydatid cyst is reported in a patient who presented with swelling of this area of 5 months' duration. Examination revealed a soft, nontender, mobile mass measuring 7×5 cm. Chest x-ray and abdominal ultrasonography were normal. Excision of the mass was performed and pathologic examination revealed a hydatid cyst of the submandibular gland.

Keywords: Submandibular gland, hydatid cyst, echinococcus.

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INTRODUCTION

Hydatid cyst is a common disease among humans and animals. Food contamination by canine feces containing ova of *Taenia echinococcus* is more likely to occur among people living in close association with animals. Human ingestion of such contaminated food leads to the hatching of ova in the gastrointestinal tract. Most of the ova are filtered by the liver or lung, but some escape into the general circulation to involve the brain, kidneys, bones and other tissues.^{2,3}

Hydatidosis of the head and neck region is uncommon, even in countries where echinococcus infestation is high.⁶ Involvement of the salivary glands, in particular the submandibular gland, is very rare and there are few reports concerning the infestation of these areas.^{1,4,6}

The present case of submandibular hydatid cyst may be of interest because of the unusual site of the disease and paucity of such reports.

CASE REPORT

A 46 year old female from the Bavonat region of Fars province in southern Iran, referred to Khalili Hospital,

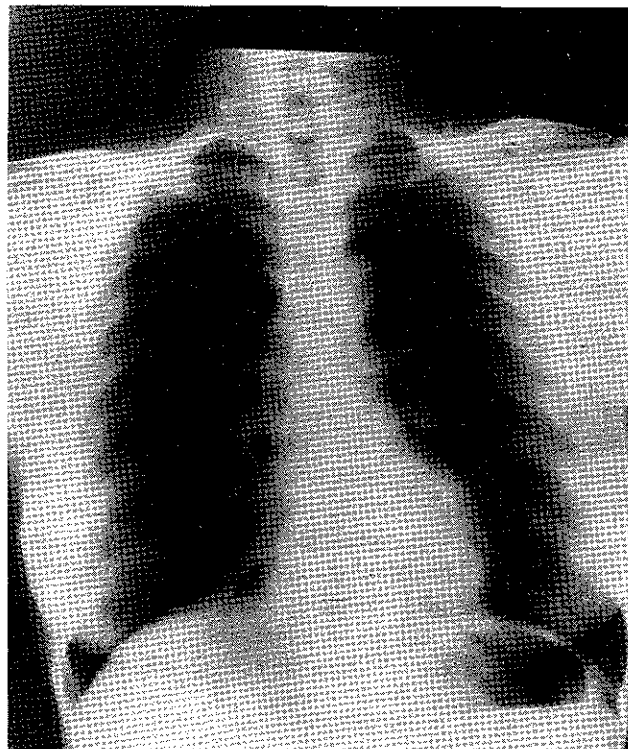


Fig. 1. Chest x-ray of the patient showing no demonstrable pathology.

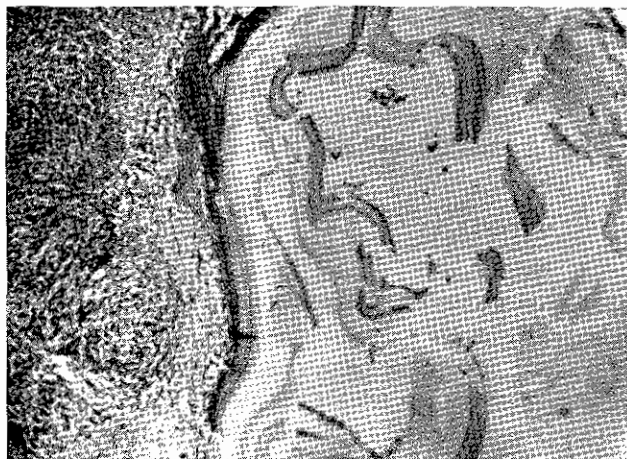


Fig. 2. Hydatid cyst wall in salivary gland tissue (hematoxylin-eosin, $\times 250$).

Shiraz, with a swelling on the left side of her neck in the submandibular region for a duration of 5 months, prior to which the patient had no complaint. The swelling had increased in size, but had remained painless and without any other significant problem. No history of cough, hemoptysis or jaundice was reported, and examination revealed the patient to be afebrile. The skin overlying the soft, nontender, mobile mass showed no redness or warmth. The size of the mass was 7 \times 5 cm and intraoral examination revealed no stones in the left submandibular gland duct.

Milking of the submandibular glands showed decreased saliva production on the involved side, which was clear.

Examinations of the chest and abdomen proved normal, as did the chest x-ray (Fig. 1). X-ray of the submandibular region, however, showed a soft mass with no radiopaque shadow or erosion of the mandible. Ultrasonography of the submandibular area revealed a cystic mass with a solid component.

Complete blood count and sedimentation rate were normal and showed no eosinophilia. The tuberculin test (PPD) was also normal.

With the impression of a cystic mass of the submandibular gland, surgery was performed via a horizontal incision about 4 cm below the lower edge of the mandible. After dissection of the surrounding tissue, the submandibular gland was exposed and completely removed without rupturing the cyst. The submandibular gland was incised and a cyst sized 3 \times 4 cm, containing a whitish-yellow fluid was seen.

The patient was discharged from the hospital with no complication. The pathologic report showed a hydatid cyst (Fig. 2). Periodic check-ups, including abdominal ultrasonography and x-ray examination, were performed during the first year post-op which revealed no pathological findings.

DISCUSSION

Hydatid cyst of the submandibular gland is very rare.^{4,6} Clinical manifestations of hydatid cysts are due to mechanical effects on the involved organ and allergic reactions to the cyst fluid.²

Paraclinical work-up includes conventional x-ray and ultrasonography studies, or CT scan.² In addition, specific tests such as Casoni's test and indirect hemagglutination, may be of use in diagnosis of the disease.^{3,5}

Surgical treatment remains the standard therapy since there is no response to drug administration.⁵

Tuberculosis or cystic tumors may present in the submandibular area as a painless cystic mass, but paraclinical work up of our case revealed no such pathology.

Even though hydatid cysts are abundantly found in the liver, lungs and other areas, to our knowledge there are no reports to date concerning submandibular gland involvement in Iran.

Therefore, it may be seen that hydatid cyst may involve the submandibular gland and this possibility should be borne in mind when a submandibular mass is seen.

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