



A CASE OF HYDATID CYST OF THYROID GLAND

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ABSTRACT

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Hydatid cyst may be found in almost any part of the body, but most often in the liver and the lungs. Other organs affected occasionally include the brain, muscle, kidney, heart, pancreas, adrenal, and thyroid gland. Hydatidosis located in the thyroid is an infrequent finding, even in endemic regions. This report documents a rare case with a cystic nodule in the thyroid detected by ultrasonography. The patient was a 30-year-old woman with an euthyroid multinodular goitre. Ultrasonography revealed a cystic nodule, and the ultrasonic appearance of the cyst liquid showed multiple echoes, suggesting that the nodule could be a hydatid cyst. The histopathologic examinations confirmed this to be a primary hydatid cyst of thyroid. During the differential diagnosis of the cystic thyroid lesions, hydatid disease of the thyroid gland should be considered in endemic areas. Chemotherapy is necessary to avoid recurrence.

Key words: Hydatid Cyst, Thyroid Gland, Cystic Nodule, Endemic Areas.

“Hydatidosis of thyroid gland”

INTRODUCTION

Echinococcosis, although eradicated in many countries, is still widespread in agricultural communities and cystic hydatidosis is a significant public health problem in the regions where echinococcosis is endemic. In endemic areas, prevalence rates of 2-6% or higher have been recorded. The hydatid cysts associated with echinococcosis may be found in almost any part of the body, resulting either from primary inoculation or via secondary spread. The liver is affected in approximately two-thirds of the patients, the lungs in approximately 25% and the other organs including the brain muscle, kidney, bone, heart and pancreas are affected in a small portion of the patients. On the contrary, thyroid gland involvement is rather rare.¹

CASE REPORT

History: A 30 year old woman, without any history of farming or raising livestock, presented with an enlarging neck mass, which was noticed 6 months before her presentation. There was no history of dysphagia, dysphonia, or features suggestive of thyroid over activity.

On Examination: The patient was normotensive, with no features of hyperthyroidism. Further examination revealed a well-circumscribed 3×2.5 cm mass was observed in the right lobe of the thyroid, which was non tender on palpation, not fixed to the surrounding structures, with no cervical lymphadenopathy. No other physical abnormalities were noted.

Investigations revealed normal thyroid function tests as well as normal routine laboratory tests. An ultrasound study revealed enlarged right lobe of thyroid with large cystic nodule in it along with multiple daughter cysts within the cystic nodule. A technetium-99m scan demonstrated that it was a cold nodule. Abdominal ultrasonography and chest X-ray were negative for hydatid cyst. USG guided FNAC was performed using 23 G needle and thick turbid creamy fluid was aspirated. Post-FNAC period was uneventful. The FNAC smears were stained with May-Grünwald Giemsa (MGG) and Papanicolaou stain. The smears showed many fragments of hyaline, laminated cyst wall membrane in a background of cellular debris. The diagnosis of hydatid cyst was confirmed by the presence of scolices and hooklets of *Echinococcus*. In addition few brood capsules were also found in the smears. A complement

fixation test was positive.

Treatment: She received Albendazole treatment (400 mg/day) for 28 days. Nonetheless, there was no evidence of any other foci of hydatid disease.

Follow-up: At three month follow up, a repeated examination showed no recurrence of the hydatid disease.



Fig-1 Ultrasound of Thyroid gland

DISCUSSION

Hydatid cyst involvement of the thyroid gland is an extremely rare condition even in endemic regions^{2,3}. The cyst might remain clinically silent for a long period of time, presenting as a slowly growing mass. However, it may also suddenly increase in size after years of silence. As it increases in size, it may adhere to the surrounding structures, such as trachea, esophagus, carotid sheath, recurrent laryngeal nerve, and the strap muscles, similar to the thyroid carcinoma. In the subsequent stages, the patient may present with pressure symptoms and signs such as dyspnea, hoarseness or dysphagia. Paralysis of the vocal cord, as well as perforation of the cyst into the trachea with fatal results have also been recorded. As described above, the patient had no history of dysphagia, or dysphonia. Hydatid cyst of the thyroid is generally the primary focus of the infestation. Only a few patients were reported to

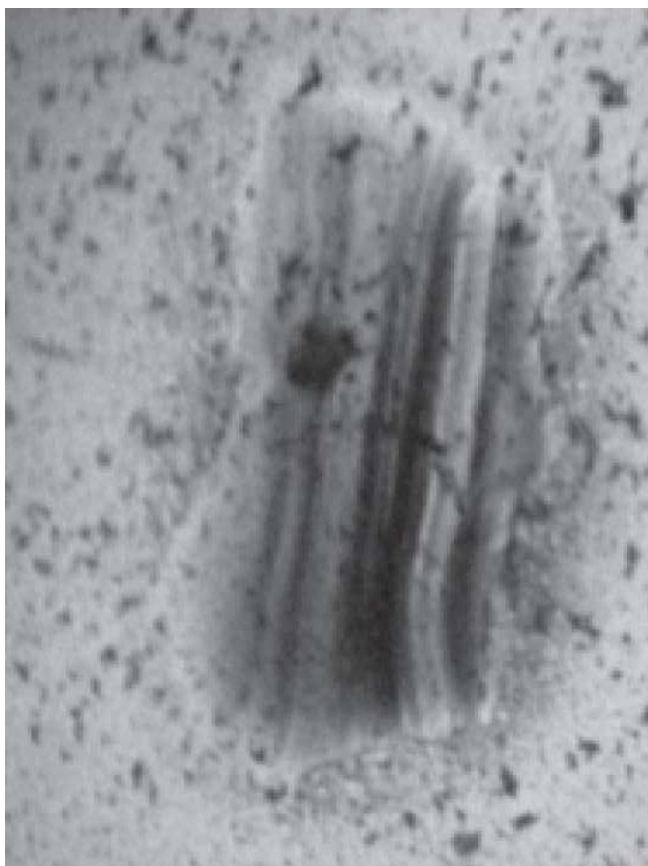


Figure 2. Fragments of the hyaline, laminated cyst wall membrane in a background of cellular debris have had concomitant hydatid cyst in the liver or another organ with thyroid⁴. Parasitic embryo can enter the systemic circulation and lodge in the thyroid gland after either bypassing (primary type) or passing through (secondary type) the hepatic microcirculation. Our case is an example of the primary type of the disease.

Hydatid cyst of *Echinococcus granulosus* can develop in any part of the body. *Echinococcus granulosus* can settle in the thyroid gland passing the liver and lungs. A high blood flow rate in the thyroid gland may be responsible for it. However, the small diameter of the thyroid arteries explains the rarity of the disease. Although FNAB is not recommended because of the risk of spreading cyst fluid or releasing an anaphylactic shock, there is only one report in the literature mentioning allergic reaction after FNAB. CT provides further information about calcification and septation of cystic

masses. Immunodiagnostic tests are helpful but the actual diagnosis is usually surprising. Cystic thyroid swelling is frequently encountered in endemic areas like India. This case increases the index of suspicion about the presence of hydatid cyst within these cystic lesions. This possibility should not be overlooked during needle aspiration and extreme care should be taken to prevent possible complications. If aspiration is required, it should be performed under ultrasonography or tomography guidance.⁵

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