

THYROID ABSCESS IN A PATIENT WITH DIABETES MELLITUS

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INTRODUCTION

Thyroid gland abscess is an uncommon condition, with fewer than 300 cases reported in the literature.

Its rarity is attributed to the remarkable resistance of the thyroid gland to infections because of its protective mechanisms, which include a rich blood supply, good lymphatic drainage, high iodine content, and the protective capsule surrounding the gland. The most common mechanism of thyroid infection is transmission of an infection via a pyriform sinus fistula.

We report the case of thyroid abscess in a patient with Type 2 Diabetes Mellitus (DM).

CASE

➤ A 65 years old male patient with Type 2 DM admitted our out-patient clinic with the complaint of tiredness, high blood sugar and swelling in right side of the neck. He was on oral antidiabetic treatment and his glucose levels couldn't be regulated since two months.

➤ His blood pressure was 110/70 mm Hg, heart rate was 81 beats /min and his temperature was 36.80 °C.

➤ On physical examination, a 1x2 cm nodule was found on the right thyroid lobe. Thyroid ultrasonography revealed a nodule cystic in appearance with a solid component at the right lobe.

➤ In laboratory examination, serum TSH, FT3 and FT4 were in normal ranges. The thyroglobulin antibody and thyroid peroxidase antibody tests were negative.

➤ In cytologic evaluation, needle aspiration of the drained 2 ml pus showed a large number of polymorphonuclear leukocytes. There were no microorganisms on microscopic examination and no growth on culture.

➤ Tuberculosis DNA PCR was negative. High sensitive CRP, ESR and leukocyte count was in normal limits. Baryum esophagogram was normal, no fistula could be determined.

➤ Two months after the diagnosis total thyroidectomy was performed and histopathological examination revealed chronic inflammatory reaction surrounding the right thyroid nodule with fibrosis. No microorganism could be identified.

➤ The patient was diagnosed as a sterile and restrained thyroid abscess with unknown origin.

DISCUSSION

In our case the patient was diabetic and his blood sugar was not regular. This may have made the patient prone to infection. There are several routes of spread of infection to the thyroid gland. Many sources have been reported including hematogenous and lymphatic spread, direct penetration from adjacent structures, neck injuries. The most frequent reason of thyroid abscess is congenital pyriform sinus fistula. If thyroid abscess is not diagnosed and treated quickly, septicemia, retropharyngeal abscess, tracheal or esophageal rupture, suppurative mediastinitis can be occur.

In the present case the pus obtained by FNAB from the nodule showed no microorganisms on microscopic examination and no growth on culture. Tuberculosis DNA PCR was also negative. A prime cause of infection could not be found.

Our case was followed for 2 months. An antibiotic therapy was initiated but there was no change in size of the nodule. None of the inflammatory markers were elevated during this period. Although some of the authors do not recommend thyroidectomy, it was the only treatment choice. This case is reported because of the rarity of the condition.

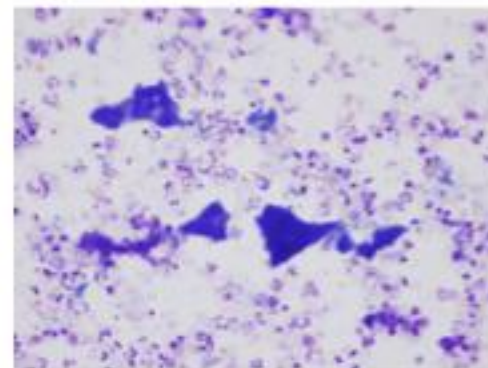


Figure 1. Cytologic evaluation: Abscess formation with colloid material, histiocytes and polymorphonuclear leukocytes. X400 Giemsa

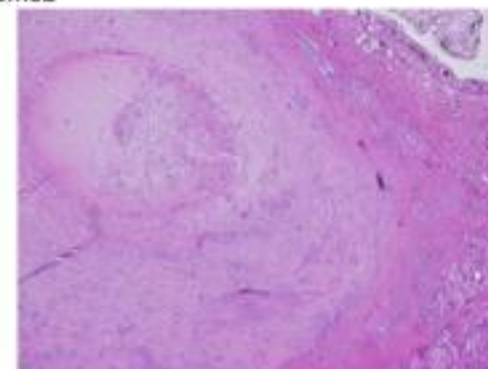


Figure 2. Histopathologic evaluation: Chronic inflammation and fibrosis surrounding on ruptured colloid nodule. X40 HE