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Case Report

THYROID ABSCESS WITH THYRO-CUTANEOUS FISTULA FOLLOWING NEEDLE ASPIRATION; A RARE PRESENTATION OF PAPILLARY THYROID CANCER

Papiller tiroid kanserinin nadir bir prezentasyonu; İnce iğne aspirasyon biyopsisini takiben görülen tiroid apsesi.

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ABSTRACT

Thyroid abscess is rare in adults. In children it is usually associated with pyriform sinus fistula. Spreading infections from lungs, disseminated infections are other causes. Papillary thyroid cancer complicated by thyroid abscess is rare, thyro-cutaneous fistula is further rare.

Here, authors present a case of thyroid abscess with thyro-cutaneous fistula in the background of papillary thyroid cancer following needle aspiration.

Key words: Thyroid, abscess, fistula, fine needle aspiration biopsy.

ÖZET

Yetişkinlerde tiroid apsesi nadir görülen bir durumdur. Çocuklarda genellikle piriform sinüs fistülü ile birlikte görülür. Akciğer kaynaklı enfeksiyonlar diğer sebeplerdir. Papiller tiroid kanseri komplikasyonu olarak tiroid apsesi görülme sıklığı nadir olduğu gibi fistülize olma durumu daha da nadir görülen bir durumdur.

Burada, ince iğne aspirasyon biyopsisi sonrasında görülen bir tiroid apsesi olgusu sunulmuştur.

Anahtar kelimeler: Tiroid, apse, fistül, ince iğne aspirasyon biyopsisi.

INTRODUCTION

Thyroid abscess is a rare clinical situation (1). It is most commonly associated with pyriform sinus fistula (1). Abscess formation in the background of thyroid cancer with thyro-cutaneous fistula is further rare (2). Here we present a 42 years female presented with thyroid abscess complicated by thyro-cutaneous fistula.

Case

Fortytwo years old female patient, resident of a village in rural India was referred from district hospital with nodular thyroid swelling for last two years, with discharging pus points in the skin over the swelling (Figure 1). The swelling was initially slow growing but has increased rapidly in last two months. The index physician advised her fine needle aspiration cytology (FNAC). Two days after FNAC she developed discharging pus points in front of neck. The FNAC report came out be positive for papillary thyroid cancer. She was well before the appearance of the swelling. Past history is not contributory (no history of neck irradiation, contact with tuberculosis, foreign body impaction).

On examination she was febrile and tachycardic. There was nodular thyroid swelling involving both lobes and isthmus. There were four discharging pus points in the skin over the swelling. There were no neck lymphadenopathy. Intraoral examination revealed no abnormality. Laboratory investigations showed haemoglobin level of 9% gm, with neutrophilic leucocytosis (Total count 12,000). Biochemical examination (T3,T4, Thyroid Stimulating Hormone) pointed towards her euthyroid nature. Ultrasonography (USG) neck demonstrated nodular thyroid swelling involving both lobes and isthmus, heterogenous echotexture with

prominat cystic areas. Pus points were communicating with thyroid gland. There were no lymphadenopathy on USG.

Plan of total thyroidectomy with excision of fistulous tracts with level VI neck nodal dissection was made. The operation was done via a modified collar incision including the pus points. Pus culture reveled presence of staphylococcus sp. Post operatively she was on culture-specific antibiotics and made an uneventful recovery. Histopathology showed papillary projections with psammoma bodies indicating papillary thyroid cancer limited within thyroid.

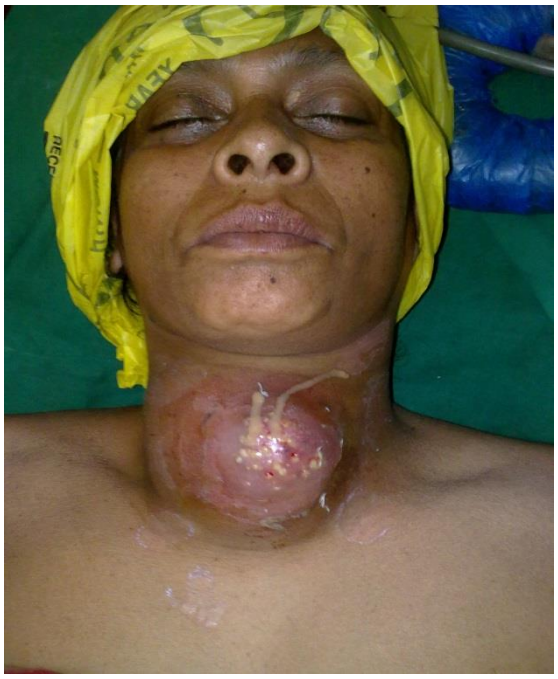

Figure 1: Thyro-cutaneous fistula in a 42 years old female.

DISCUSSION

Thyroid by virtue of its high vascularity, capsule and high iodine content within it, is relatively resistant to infections (1). Infection leading to abscess formation is thus rare. Its occurrence is more frequent in children and commonly predisposed by presence of anatomical defect like pyriform sinus fistula (3). Other causes of thyroid abscess are- spreading infection from lungs, complicated acute suppurative thyroiditis, tubercular abscess (4). Needle tract infection following aspiration of thyroid cyst has been reported (5). Hodgkins disease involving thyroid gland may present with abscess rarely (6). Only two reports are available stating thyroid abscess in the background of malignancy (7,8). In one case, anaplastic thyroid cancer presented with retrophayngeal abscess; other one PTC complicated with thyroid abscess and esophageal perforation (7,8).

Common causative organisms identified are staphylococcus and streptococcus. Reports are available where *E. Coli*, *Streptococcus pneumonae*, *Scedosporium apiospermum* and *Fusobacterium mortiferum* have been isolated (8). Even as a part of disseminated nocardial infection, thyroid abscess has also been documented (6).

This present case had PTC. The recent increase in size is possibly either due to cystic degeneration or malignant transformation in the background of multinodular goiter. Abscess formation may be a sequel of cystic degeneration or needle tract infection. Appearance of cutaneous fistula after FNAC supports the later concept.

Thyroid abscess without malignancy is best treated with drainage and antibiotics (7). But it is difficult in presence of malignancy, becomes further confusing when thyro-cutaneous fistula is present, which makes the disease locally advanced. Excision of fistulous tract with malignant type of thyroid surgery with appropriate antibiotic therapy is the mainstay if management.

In conclusion; thyroid abscess is rare but can be encountered with malignancy. Prompt diagnosis, metastatic work up and early surgery offers best care.

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