ABCES TIROIDIAN CU FISTULĂ CERVICALĂ PERSISTENTĂ – PREZENTARE DE CAZ

THYROID ABSCESS WITH PERSISTANT CERVICAL FISTULA – CASE REPORT

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Abstract:
Thyroid abscess is a rare condition which should not be omitted by the clinicians because without an adequate diagnosis and management it may cause severe complications. This paper reports an 81-years old patient with a persistent cervical fistula secondary to a thyroid abscess (Staphylococcus aureus infection) which was solved through a total right thyroid lobectomy. The case is interesting due to the rarity and the management difficulties in the context of a rare benign thyroid disorder in an elderly patient with multiple comorbidities.

Key-words: *thyroid abscess, chronic cervical fistula*

Introduction

The thyroid abscess is a rare clinical entity (less than 1% of the patients with thyroid diseases) but it must not be omitted by the clinicians because in the absence of an adequate diagnosis and treatment it may lead to severe complications [1, 4, 5, 7]. Our paper presents a case of thyroid abscess revealed by a persistent cervical fistula.

Case report

We report an 81 years old male patient, with multiple cardiac comorbidities (hypertensive cardiomyopathy, mild aortic and mitral regurgitation, and bradycardia) who was referred to our unit due to the presence of a painful pseudotumoral mass in the anterior cervical region. During the last 2 months the patient developed a skin ulceration with obvious inflammatory signs and persistent purulent secretions.

The CT examination showed a cervico-thoracic mass, probably of thyroid origin, while the blood tests showed a mild leukocytosis (9780 leukocytes/mm3, 7880 neutrofiles/mm3). The bacteriologic examination from the purulent secretions was positive for Staphylococcus aureus sensitive to gentamycin. Our initial approach (local anesthesia) was to perform debridation and lavage, with multiple biopsies, which have shown a chronic inflammation without signs of neoplasia. Thyroid hormone levels were normal (TSH 4.92 ng/dl, fT4 0.82 ng/dl).

Due to the persistent fistula (figure 1) we performed a CT reevaluation which showed a multinodular goiter, predominantly on the right side, with right paratracheal extension and compressive effect, and an external fistulous trajectory originating from the inferior pole of the thyroid gland (figure 2).

Figure 1. Preoperative aspect showing the chronic cervical fistula.

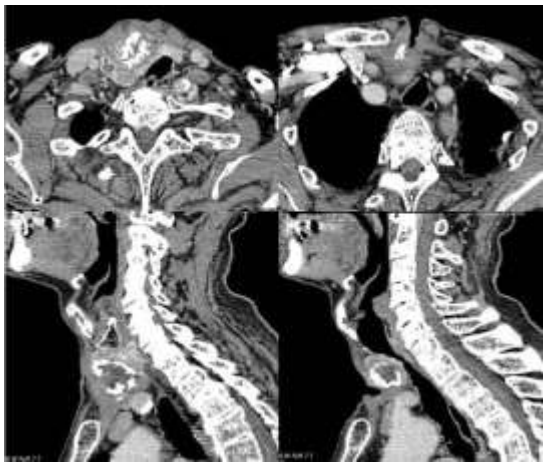

Figure 2. Preoperative CT scan

Figure 3. Operative specimen

Due to the CT aspect we decided to perform surgery. Intraoperative we found an enlarged right thyroid lobe with multiple nodules and a 2 cm diameter suppurated cavity in the inferior part which presented a direct communication (fistula) with the chronic cervical wound. Considering the lesion, the age and the associated comorbidities we have performed a right total lobectomy (figure 3), the wound being left open and packed with gauzes due to the chronic suppuration. The histopathological examination confirms the result of previous biopsies.

The postoperative course was difficult (extreme bradycardia requiring emergency placement of a temporary pacemaker followed by a definitive one, renal failure), but slowly favorable, the patient being discharged at one month after surgery. At one year follow-up the patient has no significant complaints and presents a healed cervical wound.

The pathological examination revealed a multinodular goiter, with a dominant colloid nodule in the right lobe. This nodule had a 45 mm diameter and was delimited by a fibrous, calcified capsula. The parenchyma of the nodule was almost entirely replaced by an abundant inflammatory infiltrate, with extensive fibrosis and dense collagen bundles replacing the thyroid parenchyma; a few isolated normal thyroid follicles were present at the periphery of the nodule (figure 4 A-C).

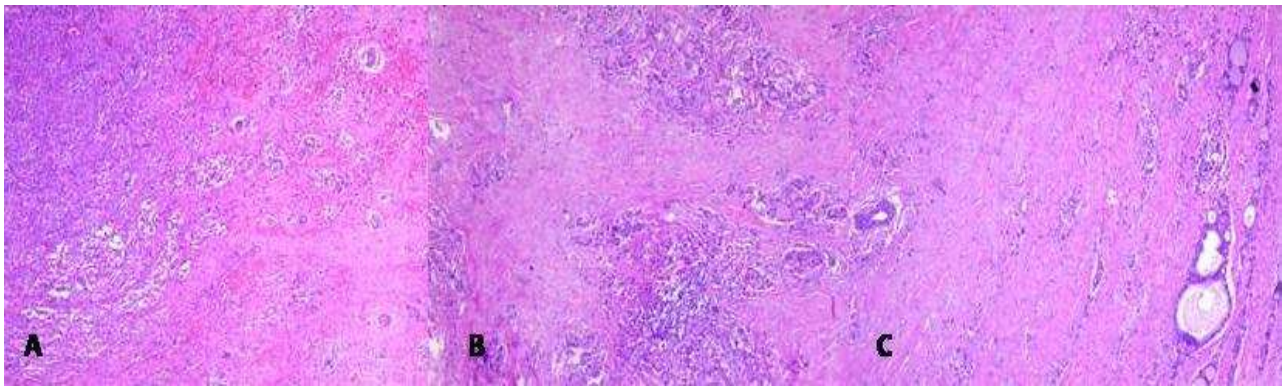

Figure 4. Replacement of the normal parenchyma by an abundant inflammatory infiltrate, with extensive fibrosis and dense collagen bundles.

The extensive suppuration and the inflammatory process extend beyond the thyroid capsule, infiltrating the striate muscles of the neck (figure 5 A). Areas of massive calcification (figure 5B) and an abundant mixt inflammatory infiltrate, with evidence of multinucleated giant cells (figure 5C) can be observed.

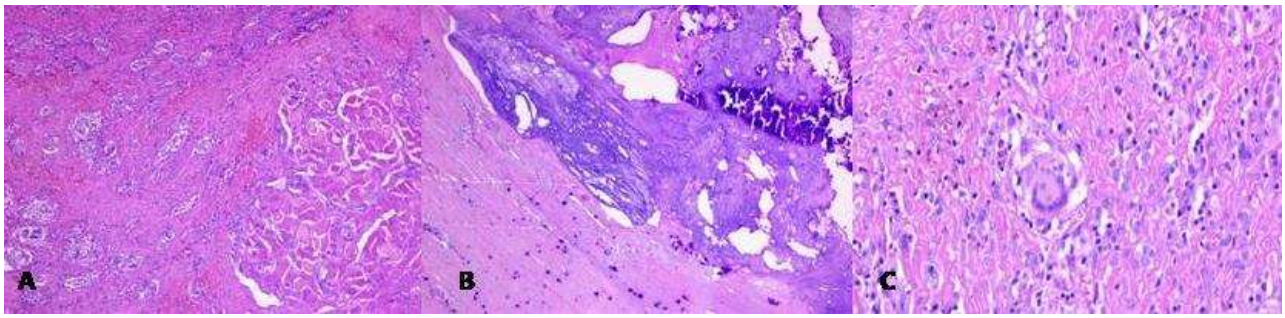

Figure 5. Extensive suppuration with massive calcification and abundant mixt inflammatory infiltrate, with evidence of multinucleated giant cells.

Discussions

The infectious involvement of the thyroid is rarely encountered due the fact that this gland is protected against infection through an excellent vascularization and lymphatic drainage, through the high iodine content and the separation from the other neck structures through fascial planes and its own capsula [4, 11]. In the available literature, most of the papers about this disease are case-reports or small series of patients.

In an older study published by Hendrick in 1955, dating from the pre-antibiotic era, he found that from a total number of 117 cases of thyroiditis, only 24% had an acute evolution and only 5% have developed an abscess [6]. In a retrospective study performed in 2018 in an Ear, Nose and Neck surgery unit, García Callejo and colleagues found only 14 cases in 41 years, representing 0.29% of all the cervical suppurations [2]. The most frequent etiological agents appear to be Staphylococcus aureus and Streptococcus pneumoniae [7, 10, 13]. In our case, the infection was generated by Staphylococcus aureus.

In children, the presence of the pyriform sinus predisposes to the development of thyroid abscesses, while in the adults this disease is associated with immunodepression, especially AIDS. The presence of other thyroid lesions is also a risk factor [5]. The thyroid abscesses are encountered more frequently in women and on the left side [8].

The thyroid abscesses develop frequently during infections of the upper respiratory tract, pharynx or medium ear. Clinical signs include sensitivity of the gland, dyspnea, pain, hoarseness, dysphagia and fever [12]. In our patient, the clinical signs were dominated by mild pain and exteriorisation of pus through an anterior cervical fistula, the thyroid function being normal. There are cases in which the suppuration of the thyroid gland is associated with malignant lesions [9]. Another diagnosis which must be taken into consideration is tuberculosis infection [3], infirmed in our case by the pathological examination (absence of characteristic caseous necrosis) and the negative bacteriology for Koch's bacillus.

Conclusions

The case presented by us is interesting due to the rarity and the management problems in the context of a benign thyroid disorder in an old patient with multiple comorbidities.

Bibliografie:

1. Adeyemo A., Adeosun A., Adedapo K. - Unusual cause of thyroid abscess - African Health Sciences 2010: Vol. 10 No 1: 101-103
2. Callejo J.G., Martinez J.R., Civera M., Columina J.V., Zoghbi V.P., Beneyto P.M. - Manejo del absceso de la glandula tiroides - Acta Otorrinolaringol Esp. 2018:1-7
3. Darre T., Amana B., Pegbessou E., Winga F., Warou D., Napo-Koura G. - Tuberculosis of the thyroid in Togo: a clinicopathologic study of 11 presumed cases - Trop Doct. 2018: 16:1-3
4. García C, Redondo M, Civera M, Verdú C, Pellicer Z, Martínez B. - Management of thyroid gland abscess - Acta Otorrinolaringol Esp. 2018 Jun 8:1-5
5. Gursimran K., Priya D., Jagdish C., Arjun D. - Citrobacter freundii as a cause of acute suppurative thyroiditis in an immunocompetent adult female – Indian Journal of Pathology and Microbiology 2017;60:282-292
6. Hendrick J.W. Diagnosis and Treatment of Thyroiditis – Annals of Surgery 1956 Vol 144, No 2: 176-187
7. Ilyin A., Zhelonkina N., Severskaya N., Romanko S. - Nonsurgical Management of Thyroid Abscess with Sonographically Guided Fine Needle

Aspiration - Wiley Periodicals, Vol. 35, No. 6, 2007: 333-337
8. Jacobs A., Gros D.A., Gradon J. - Throid Abscess Due to Acinetobacter calcoaceticus: Case Repirt and Review of the Causes of and Current Management Strategies for Thyroid Abscesses – Southern Medical Journal 2003 Vol 96, No 3:300-307
9. Loh T.L., Zulkiflee A.B. - Anaplastic thyroid carcinoma mimicking thyroid abscess - AME Case Rep. 2018 Vol. 6:2-20
10. Nirhale D.S., Athavale V.S., Gaurav G., Mohit B. - Thyroid abscess: A rare entity? - Thyroid Research and Practice November 4, 2018, IP: 5.2.179.31
11. Shamir O., Dale H., Vijay N. - Idiopathic tyroid abscess - International Journal of Surgery Case Reports 5 (2014) 484–486
12. Schweitzer V., Olson N. - Thyroid Abscess - Otolaryngol Head Neck Surg 1981; 89:226-229
13. Yedla N., Pirela D., Manzano A., Turda C., Lo Presti S. – Thyroid Abscess: Challenges in Diagnosis and Management - Journal of Investigative Medicine High Impact Case Reports Vol. 6: 1–3