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A Riedel’s thyroiditis- difficulties in differentiating with thyroid cancer.

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A hard, palpable mass localized in the perithyroidal soft tissue is often suposed of having a cancerous process. Along with dysphagia or neck pain, it causes patient and physician concern [1]. It is important for a correct diagnosis to differentiate the disease with another with an identical clinical manifestation – a Riedel’s thyroiditis. In Riedel’s thyroiditis fibrosclerotic organ manifestations can either be a part of IgG4-related disease or solely be located in the thyroid and adjacent tissues and elevation of serum IgG4 can be found [2].

Case: A 67-year-old woman with nodular goiter was referred to the Clinic as part of Rapid Oncological Diagnostics because of suspected thyroid cancer. The patient reported swelling lower neck with rapid increase in size from past 6 months. It was associated with pain, dysphagia or hoarseness. There were no other symptoms of inflammation like, fever, malaise, or myalgias. She underwent a strumectomy twelve years ago, for a nodular goitre. Due to the pain and elevated inflammatory markers, the patient has been treated on an outpatient basis with clavic acid with amoxicillin, cefuroxime and clindamycin.

Physical examination revealed enlarged thyroid left lobe (Fig.1). It was hard in consistency, most likely arising from the thyroid gland and involved left lobe and isthmus. There were no palpable lymph nodes in the neck or any other part of the body. Laboratory tests showed elevation of CRP and OB level. TSH, fT3, fT4 levels were in standard on actually suplementation (L-tyroxine 100ug per day), also elevated anti-thyreoglobulin antibodies (aTG) and anti-peroxydase antibodies (aTPO) was observed (Table 1).

Upon ultrasound of the thyroid, the right lobe of the gland was found to measure 13,1 × 14,2 × 45 mm, and the left lobe 39,8 × 36,5 × 57,4 mm. The volume of the gland was 45,8 ml, with heterogeneous, reduced echogenicity, reduced vascularization and irregular boundaries. The infiltrate covered large vessels of the neck. The trachea was compressed by a goiter and had narrowed lumen with lateral dimension of 10 mm (Figure 2, Fig 3). CT revealed a goiter reaching the upper mediastinum and infiltrating left common carotid atrery. The esophagus was attached to the infiltrate from behind. Numerous cervical lymph nodes with short axes up to 8 mm are present in the thyroid area (Fig4). Given the significant suspicion of malignancy, thyroid fine needle aspiration (FNA), was performed and showed the presence of neutrophils and histiocytes, small lymphocytes with some plasma cells without suspected malignant cells. This finding was suggestive of an exacerbated chronic inflammatory process,. No bacterial growth was found on the thyroid FNA material and
blood culture. Based on the clinical picture and results, a Riedel’s thyroiditis was suspected. IgG4 level was measured and it was elevated. No fibrosis in other localisation was observed. The final diagnosis of Riedel’s thyroiditis was made. The patient refused to undergo surgery. Treatment with prednisolone, 60 mg per day (1mg/kg) was started. In control ultrasound of the thyroid, after 6 weeks, the right lobe of the gland was found to measure 12 × 12,3 × 43,8 mm, and the left lobe 27,2 × 22,5 × 55,8mm. The volume of the gland was 20,2 ml (Fig. 5, Fig.6). The patient reported reduced pain and dysphagia.

Diagnosis of Riedel's goiter is very difficult because of the uncharacteristic clinical symptoms and the rare occurrence. Thyroid cancer and bacterial thyroiditis were suspected in this patient. Not only fine needle aspiration results, clinical picture or imaging tests, but also an IgG4 concentration in serum are helpful in differentiating Riedel's thyroiditis with the proliferative or infectious process. Fibrosis of retroperitoneal space, liver, kidneys and pancreas should be excluded, taking into account possible manifestations of the IgG4-related disease, which include also a thyroiditis. There is no agreed standard treatment for Riedel’s thyroiditis. Surgical intervention is indicated for patients with compressive symptoms, suspicious malignancy, and failure of medical management [3]. Treatment, although not supported by controlled trials is considered as treatment of choice to reverse and arrest the fibrotic process. High dose glucocorticoids are usually the first step in the medical management of the patient with the established diagnosis of Riedel’s thyroiditis and cause dramatic improvement in symptoms [4]. The second-line agent which has been used successfully in patients who relapse on glucocorticoids is tamoxifen. Case reports have also suggested that the combination of mycophenolate mofetil, with prednisolone can be used in glucocorticoid and tamoxifen- resistant patients In other instances of IgG4-related disease, and resistance to glucocorticoids and tamoxifen, rituximab has been used, with reduction of inflammation symptoms [2]

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**References**


