Kowalik Marcin, Guz Aleksandra, Myśliński Wojciech, Mieczkowska Jolanta . The rapid development of thyroid lymphoma - case report. Journal of Education, Health and Sport. 2019;9(4):332-336. eISSN 2391-8306. DOI http://dx.doi.org/10.5281/zenodo.2638799
http://ojs.ukw.edu.pl/index.php/johs/article/view/6812

The journal has had 7 points in Ministry of Science and Higher Education parametric evaluation. Part B item 1223 (26/01/2017).
1223 Journal of Education, Health and Sport eISSN 2391-8306 7

The authors declare that there is no conflict of interests regarding the publication of this paper.

Received: 28.03.2019. Revised: 30.03.2019. Accepted: 13.04.2019.

The rapid development of thyroid lymphoma - case report

Marcin Kowalik[1], Aleksandra Guz[2], Wojciech Myśliński[1], Jolanta Mieczkowska[1]

[1] Chair and Department of Internal Medicine, Medical University of Lublin, Poland
[2] Chair and Department of Paediatric Gastroenterology, Medical University of Lublin, Poland

Abstract

Thyroid lymphoma is a rare malignant neoplasm of the thyroid gland, constituting about 5% of all cases of thyroid cancer. Its incidence is higher in female patients aged 60-70 years. Many affected patients have the history of Hashimoto disease. When the goitre increases and compression symptoms occur, quick diagnosis and treatment are required. The diagnosis is mainly based on histopathological examinations. Further treatment and prognosis depend on the histopathological subtype, progression and size of the tumour. Our case report describes a 70-year-old female patient who presented due to an increasing circumference of the neck and dyspnoea aggravating for three weeks. The course of disease and the patient's condition deteriorated rapidly. Based on clinical observations and histopathological findings, thyroid lymphoma was diagnosed.

Keywords: thyroid lymphoma, thyroid cancer, thyroid

Introduction

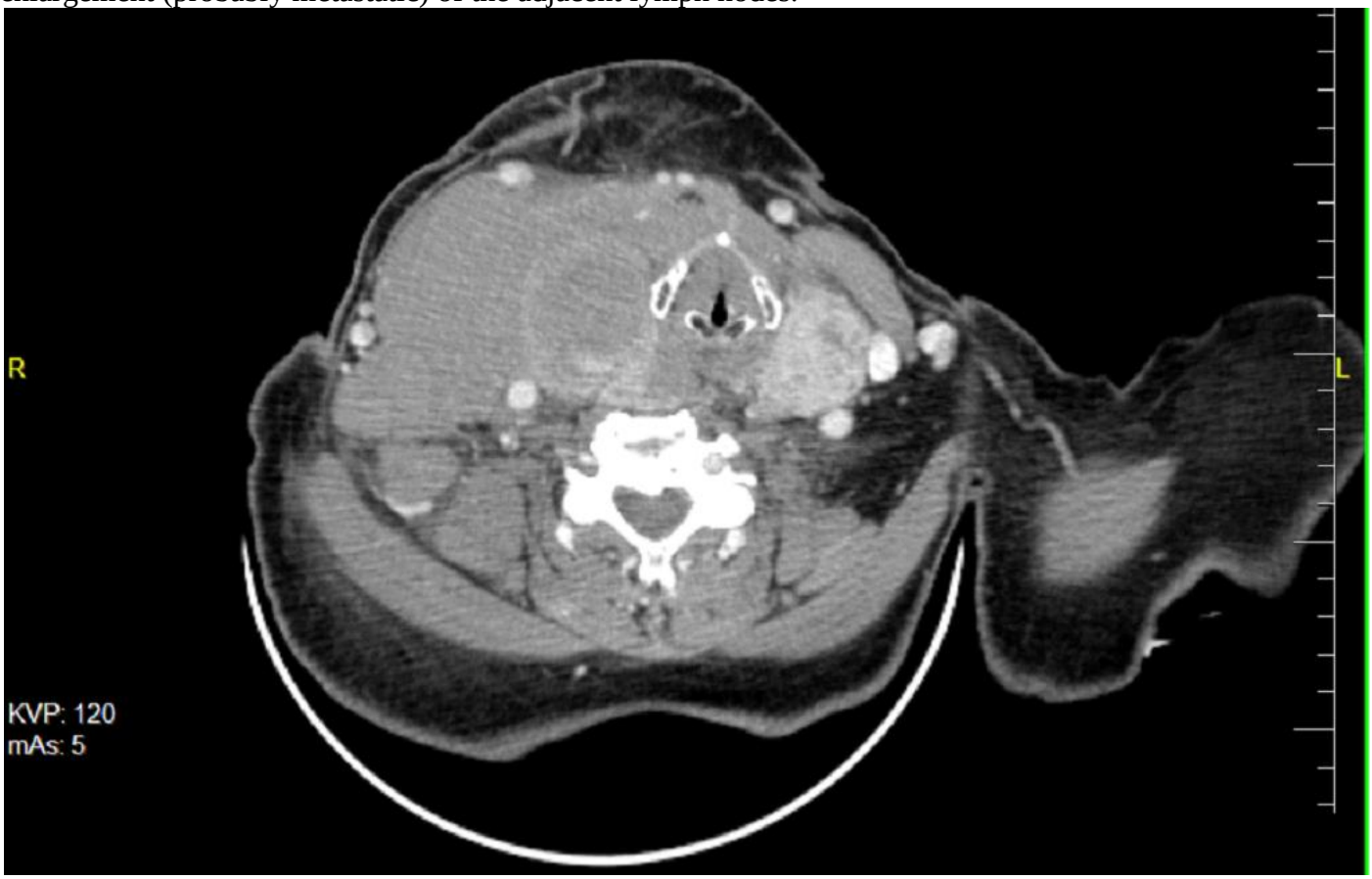
Thyroid cancer is the most common malignant tumour of the endocrine glands. In Poland, the annual incidence of thyroid cancer is >1700. Females are three-times more likely to be affected and the incidence rate is ~7.3/100 000/year. In recent years, the incidence of thyroid cancer has become increasingly high, particularly in developed countries. The risk factors include exposure to ionising radiation, deficiency of iodine, oncogenes (BRAF and RET/PTC mutations) and inherited factors. The course of the disease depends on its histopathological type. It is estimated that thyroid lymphoma accounts for about 5% of thyroid cancers and is characterised by rapidly increasing symptoms; therefore, quick diagnosis and treatment are essential. The highest risk is observed in patients with the history of Hashimoto disease [1,2,3,4].

Case report

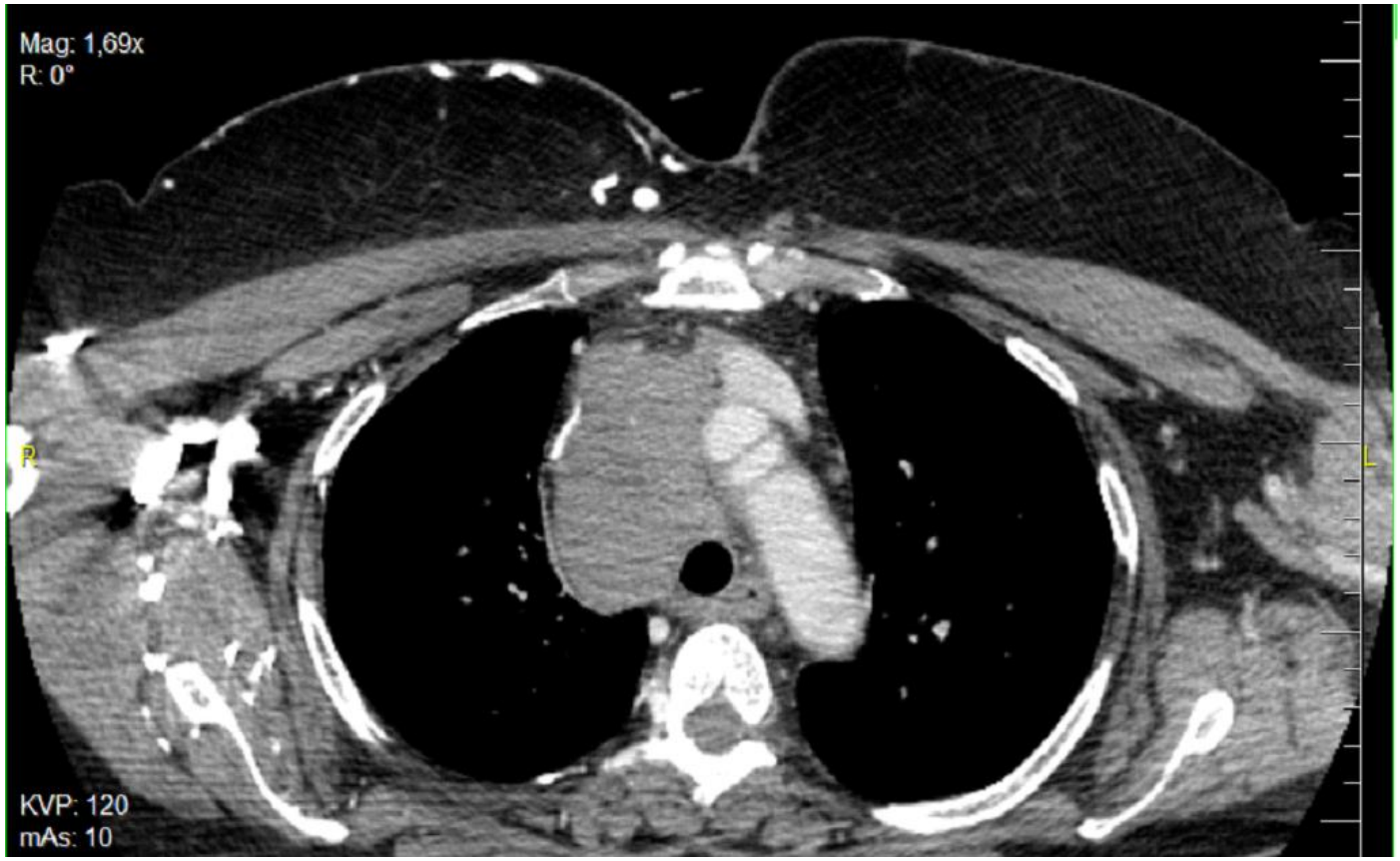
A 70-year-old female patient was admitted to the Department of Internal Diseases due to an increasing neck circumference and dyspnoea aggravating for 3 weeks. Her thyroid history was negative. On admission, the neck was asymmetrical, the solid painless tissue mass was palpable on the right side and painless, enlarged lymph nodes were detected. The laboratory findings were within normal limits. Fine needle aspiration biopsy (FNAB) was performed yet the biopsy material was found infeasible for diagnosis. The

patient`s condition deteriorated rapidly, dyspnoea was increasing, the neck and face oedema and reddening were observed.

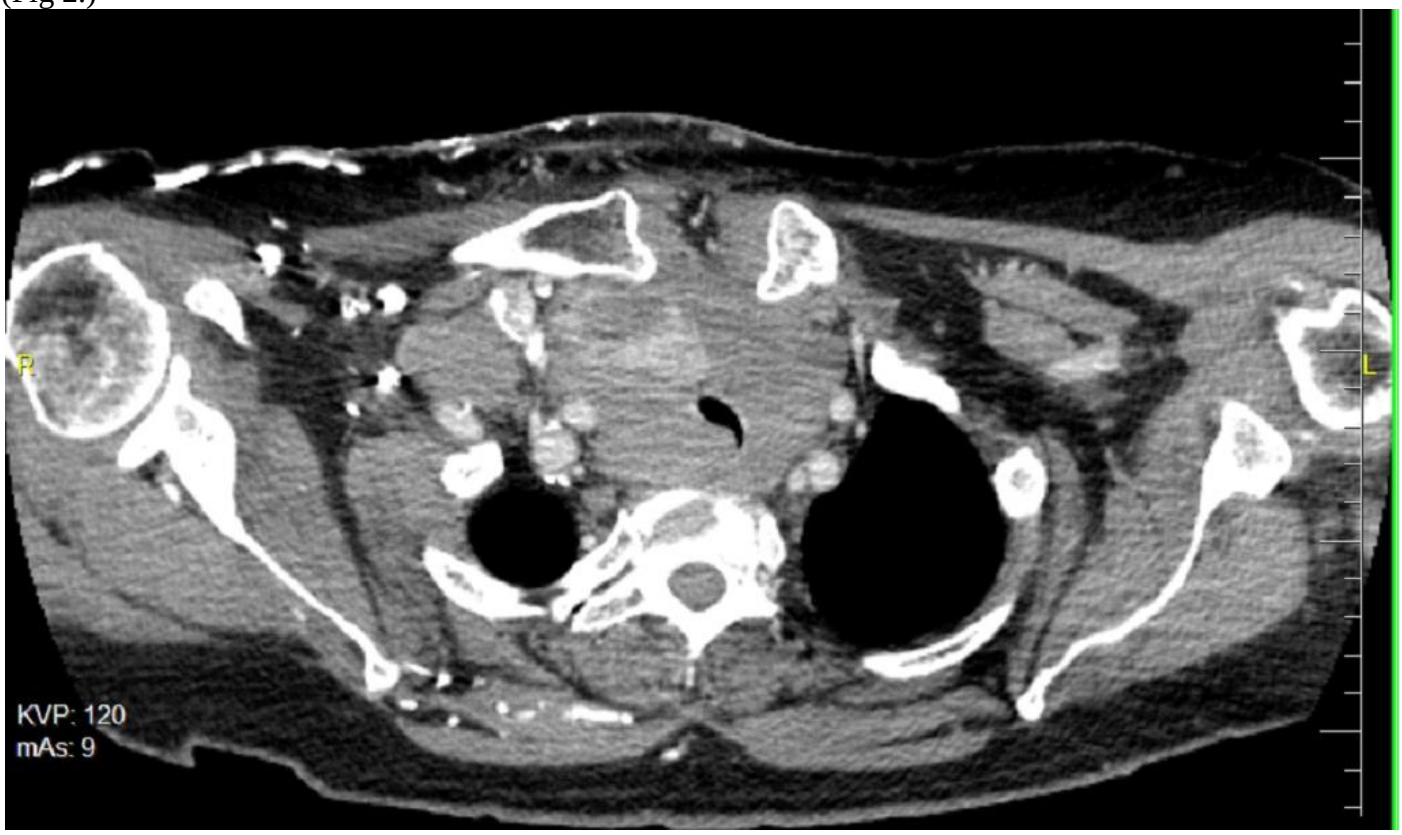
The patient underwent contrast-enhanced neck and chest CT, which demonstrated a significantly enlarged thyroid gland, inferior poles of the thyroid lobes descending below the jugular notch of the sternum, the right lobe - 72x60x110mm (APxRLxCC), the left lobe - 38x41x90mm (APxRLxCC), the isthmus– 42mm, enlarged lymph nodes tending to fuse and form conglomerates (Fig.1). The thyroid parenchyma - heterogeneous contract-enhancement. In the region of the superior mediastinum, the heterogenous tissue area , 83x66x83mm (APxRLxCC), is visible reaching the level of aortal arch (Fig 2.), which is continuous with the inferior poles of the thyroid lobes. The area above mentioned compresses, constricts the entire length of the tracheal lumen, displaces the trachea to the left side and distorts the lumen of the right brachiocephalic vein, slightly distorts the left brachiocephalic vein and the initial segment of the superior vena cava (Fig.3). The CT scan demonstrated extensive proliferation, most likely of the thyroid gland with enlargement (probably metastatic) of the adjacent lymph nodes.



(Fig. 1)



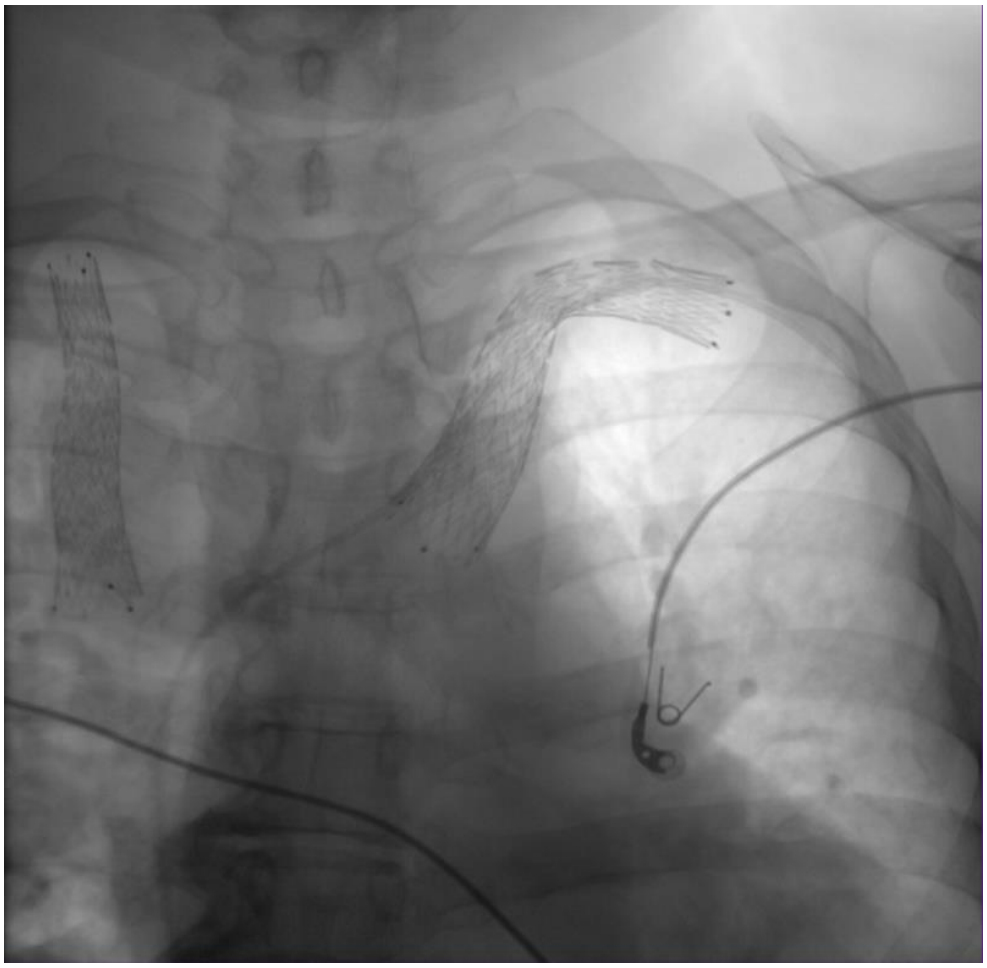
(Fig 2.)



(Fig. 3)

Considering the symptoms of compression exerted by the tissue mass on the brachiocephalic and internal jugular veins, the above vessels were stented in the Department of Interventional Radiology, which improved perfusion. The procedure involved US-guided central puncture of the vein in the region of the cubital fossa using the Seldinger technique. Phlebography revealed the constriction of the right brachiocephalic and jugular veins. The junction of the subclavicular, jugular and brachiocephalic veins were

critically constricted on the left side. Subsequently, the right common femoral vein was punctured under US guidance and 6Fr followed by 12 Fr guiding catheters were inserted. A 4 Fr catheter was inserted through the outgoing vein to the left subclavicular and left jugular vein widening them with 14mm and 12mm balloons. The brachiocephalic and jugular veins were widened with the 14 mm balloon on the right side. Then the Venovo stent (14x60mm) was implanted on the right side and the 16mmx80mm stent was implanted on the left side (Fig.4.)



(Fig. 4.)

After completing the procedure, the patient was transferred to the Department of General Surgery for further treatment, where both thyroid lobes were excised, material for histopathology was collected and a tracheostomy tube was inserted. The histopathological diagnosis was high-grade B-cell lymphoma (HGBL) of the thyroid, likely to be underlain by mucosa-associated lymphoid tissue (MALT) lymphoma. The patient was disqualified for thoraco-surgical treatment due to inability to surgically remove the mediastinal tumour. She underwent chemotherapy at the Department of Hematologic Oncology. About one month after the diagnosis, the patient died due to circulatory and respiratory disorders.

Discussion

Thyroid lymphoma is a rare malignant tumour of the thyroid gland, which accounts for about 5% of all thyroid cancers and 3% of all extranodular lymphomas. It affects more frequently women aged 60-70 years [1,3,4]. The most common histopathological subtype is diffuse large B-cell lymphoma (DLBCL), which accounts for 2/3 of cases, followed by mucosa-associated lymphoid tissue (MALT) responsible for 1/3 of cases. High-grade B-cell lymphomas can develop from MATL lymphoma due to transformation. DLBCL is characterised by rapid and aggressive course, and often requires combined treatment while MALT is less aggressive and its treatment can be more conservative. The study findings have demonstrated a strong correlation between the presence of MALT lymphoma and Hashimoto disease [3, 5]. It is essential to differentiate primary and secondary thyroid lymphoma as the prognosis in each type is different [5]. The symptoms of thyroid lymphoma predominantly develop rapidly, mainly in the form of compression symptoms, e.g. the quickly enlarging goitre can compress the trachea or veins accompanied by

lymphadenopathy. When the goitre increases and compression symptoms are observed, quick diagnosis and treatment are required. The majority of patients on diagnosis show biochemical features of hypothyroidism [4,6]. Biochemical tests, imaging testing (US, CT), fine-needle aspiration biopsy (BAC) and histopathological tests of the material collected intraoperatively can help to establish the diagnosis. [1,2]. Early diagnosis improves treatment outcome. Recently BAC is considered particularly useful [5] . Further treatment and prognosis depend on advancement and size of the tumour [2,6] . The treatment involves chemotherapy, radiation therapy, anti-CD20 monoclonal antibodies, e.g. rituximab, and surgical treatment are applied [1,4]. Prognosis (i.e. 5-year survival) for DLNCL is 75% and for MALT lymphoma -96% [4,6].

References

1. Interna Szczeklika 2018. W: Piotr Gajewski (red.). Medycyna praktyczna. Kraków, 2018

2. Benjamin Roman;Luc Morris;Louise Davies;. The thyroid cancer epidemic, 2017 perspective. Current Opinion in Endocrinology & Diabetes and Obesity. 24(5):332–336, OCT 2017.

3. Hirokawa M[1], Kudo T[2], Ota H[3], Suzuki A[3], Kobayashi K[4], Miyauchi A[4]. Preoperative diagnostic algorithm of primary thyroid lymphoma using ultrasound, aspiration cytology, and flow cytometry. Endocr J. 2017 Sep 30;64(9):859-865

4. Walsh S[1], Lowery AJ, Evoy D, McDermott EW, Prichard RS. Thyroid lymphoma: recent advances in diagnosis and optimal management strategies. Oncologist. 2013;18(9):994-1003.

5. Nam M[1], Shin JH, Han BK, Ko EY, Ko ES, Hahn SY, Chung JH, Oh YL. Thyroid lymphoma: correlation of radiologic and pathologic features. J Ultrasound Med. 2012 Apr;31(4):589-94.

6. Stein SA[1], Wartofsky L. Primary thyroid lymphoma: a clinical review. J Clin Endocrinol Metab. 2013 Aug;98(8):3131-8.