

Primary Non-Hodgkin's Lymphoma Of The Thyroid Gland: A Case Report

B Suresh, B Rao, K Pai, N Shelgi

Citation

B Suresh, B Rao, K Pai, N Shelgi. *Primary Non-Hodgkin's Lymphoma Of The Thyroid Gland: A Case Report*. The Internet Journal of Surgery. 2013 Volume 30 Number 3.

Abstract

Primary lymphoma is an uncommon malignancy of the thyroid, comprising 0.6 to 5 per cent of thyroid cancers in most series. Primary thyroid lymphomas (PTL) occur most commonly in elderly women and are commonly of B-cell origin. In our case, an elderly female presented with goiter and obstructive features. The fine-needle aspiration cytology (FNAC) revealed Hashimoto's thyroiditis. Histopathology showed non-Hodgkin's lymphoma of the thyroid gland.

INTRODUCTION

Primary lymphomas of the thyroid gland are rare tumors and account for less than 2% of all thyroid neoplasms and less than 1% of all non-Hodgkin's lymphomas (NHL).^{1,2} Contrary to other types of lymphoma, female preponderance is common.^{2,3} Hashimoto's thyroiditis is a known predisposing condition for B-Cell Lymphoma of the thyroid gland.³ We report a 60-year-old female with B-cell Lymphoma and Hashimoto's thyroiditis.

CASE REPORT

A 60-year-old female presented with thyroid swelling for the past 15 years, with rapid increase in size for the past 3 months. The swelling was associated with pain and with no history suggestive of change in voice, dysphagia and breathlessness. Local examination revealed thyroid swelling involving both lobes, with nodular surface and firm to hard consistency and not extending to the mediastinum. There was no cervical lymphadenopathy, there were no signs of thyrotoxicosis and systemic examination was unremarkable. The laboratory investigations were within normal limits. The neck x-ray showed deviation and compression of the trachea, indirect laryngoscopy showed mobile vocal cords. The FNAC revealed Hashimoto's thyroiditis. In view of tracheal compression and deviation, total thyroidectomy was planned. Both lobes and the isthmus were enlarged, with the isthmus adherent to the trachea. The trachea was soft on palpation. Few enlarged level VI lymph nodes were noted. In view of the possibility of tracheomalacia, the endotracheal tube was kept for 2 days and later tracheostomy was done for post-operative stridor due to tracheomalacia.

Histopathology showed diffuse large-cell non-Hodgkin's lymphoma arising in Hashimoto's thyroiditis (Figures 1&2) and the lymph nodes showed reactive follicular hyperplasia. CT of thorax and abdomen and bone marrow biopsy were normal. Medical oncology consultation was sought and advised for chemotherapy, but the patient was willing to take chemotherapy at Tata Memorial Cancer Hospital (TMC) Mumbai. So she was referred to TMC Mumbai for further management. A medical oncology consultation was sought and advised for chemotherapy. The patient had six cycles of chemotherapy and after two years of follow-up there is no evidence of recurrence or distant metastasis.

Figure 1

Diffuse infiltration by large atypical lymphoid cells, showing karyorrhexis (x200, H&E).

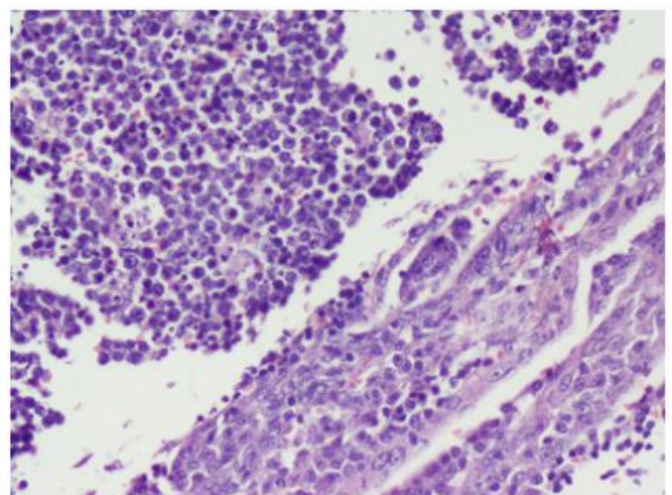
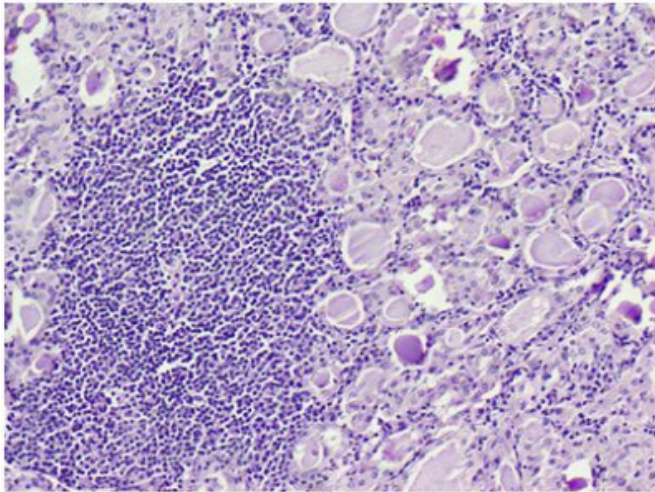


Figure 2

Thyroid follicles lined by Hurthle cells and dense lymphocytic infiltrate (x100, H&E).



DISCUSSION

Primary thyroid lymphoma is a heterogeneous disease with a wide spectrum of histological subtypes. The term “primary” means involvement of the primary organ (thyroid) on diagnosis, with either localized disease or dissemination to nodal or extranodal sites.⁴ It presents as a rapidly growing thyroid swelling, predominantly seen in the elderly woman in the sixth and seventh decade with a male-to-female ratio of 1:4.²⁻⁶ Primary thyroid lymphomas constitute 2.5-7% of all extranodal lymphomas.⁷ The majority of these neoplasms are B-cell lymphomas and large-cell type, and rarely T-cell type.³ The association between NHL and Hashimoto’s thyroiditis has been reported between 30% and 70%. It has been suggested that the chronic inflammatory response secondary to the autoimmune disorder elicited in Hashimoto’s disease will eventually progress to chronic proliferation of lymphoid tissue and subsequent malignant progression.⁸⁻¹⁰ The diagnosis of thyroid lymphoma can easily be established by using FNAC or core biopsy.¹¹ It is controversial whether reliable diagnosis of thyroid lymphoma is possible on the basis of an FNAC. Hypocellularity and the difficulty in distinguishing a lymphoma from the lymphoid infiltrate found in Hashimoto’s thyroiditis are the main reasons to doubt the reliability of FNAC for the diagnosis of thyroid lymphoma, occasionally even thyroidectomy or open biopsy is required.¹¹ Obstruction or compression of the trachea may require isthmectomy or thyroidectomy. CD 15 negativity speaks against the diagnosis of Hodgkin’s lymphoma,

whereas CD 30 positivity is in favor of the large-cell type.⁷ Once the diagnosis is established, further investigations are required for staging the disease and also for ruling out that it is a primary lymphoma of the thyroid gland. Treatment is based on the lymphoma subtype and the extent of disease. Once the diagnosis is confirmed, the patient has to undergo a combination of radiotherapy and chemotherapy with regular follow-up.

CONCLUSION

FNAC of the thyroid gland may be inconclusive in diagnosing NHL in patients with coexisting Hashimoto’s thyroiditis. Total thyroidectomy should be considered in a long-standing thyroid swelling with recent history of rapid increase in size and pressure symptoms, considering malignant transformation. Further management should be based on HPE and other investigations.

References

1. Mizukami Y, Michigishi T, Nonomura A, Nakamura S, Hashimoto T, Katsuda S, et al.: Primary lymphoma of thyroid, a clinical, histological and immunohistochemical study of 20 cases. *Histopathology*; 1990; 17: 201-9.
2. Austin JR, EL-Naggar AK, Goefert H: Current concept of thyroid and parathyroid disorders. *Otolarygol Clin North Am*;1998; 29: 4.
3. Aozosa K, Inoue A, Tazima K, Miyauchi A, Kuma K: Malignant lymphomas of thyroid gland. Analysis of 79 patients with emphasis on histological prognostic factors. *Cancer*; 1986; 58:100-4.
4. Aozasa K, Inoue A, Tajima A, Miyauchi A, Matsuzuka F, Kuma K: Malignant lymphoma of the thyroid gland: Analysis of 79 patients with an emphasis on histologic prognostic factors. *Cancer*.1986; 58: 100-104.
5. Coltrera MD: Primary T-cell lymphoma of the thyroid. *Head Neck*; 1999; 21: 160-3.
6. Abdul-Rahman ZH, Gogas HJ, Tooze JA, Anderson B, Mansi J, Sacks NP, Finlayson CJ: T-cell lymphoma in Hashimoto’s thyroiditis. *Histopathology*.1998; 29: 455-9.
7. Pedersen R, Pedersen N: Primary non-Hodgkin's lymphoma of the thyroid gland: a population-based study. *Histopathology*; 1996; 28: 25-32.
8. Scholefield J, Quayle A, Harris S, et al.: Primary lymphoma of the thyroid, the association with Hashimoto's thyroiditis. *Eur J Surg Oncol*; 1992; 18: 89-92.
9. Hyjek E, Isaacson P: Primary B-cell lymphoma of the thyroid and its relationship to Hashimoto's thyroiditis. *Human Pathol*; 1988; 19: 1315-1326.
10. Holm LE, Blomgren H, Lowhagen T: Cancer risks in patients with chronic lymphocytic thyroiditis. *N Engl J Med*;1985; 312: 601-614.
11. Thieblemont C, Mayer A, Dumontet C, Barbier Y, Callet-Bauchu E, Felman P, et al.: Primary thyroid lymphoma is a heterogeneous disease. *J Clin Endocrinal Metab*; 2002; 87: 105-11.
12. Haciyanli M, Erkan N, Yorukoglu K, Sagol O, Harmancioglu O: Primary non-Hodgkin’s T-cell lymphoma of the thyroid gland complicating Hashimoto’s thyroiditis: case report. *Thyroid*; 2000; 10: 717-20.

Author Information

BP Suresh, MS

Department of Surgery Kasturba Medical College
Karnataka, India
docsureshbp74@yahoo.co.in

BHA Rao, MS

Department of Surgery Kasturba Medical College
Karnataka, India

Kanthilatha Pai, MD

Department of Pathology Kasturba Medical College
Karnataka, India

Nikil Shelgi

Department of Surgery Kasturba Medical College
Karnataka, India