

**CASE REPORT****Primary Non-Hodgkin's Lymphoma of Thyroid Gland – Report of a Rare Case***Nikita Rolekar<sup>1</sup>, Samir Thakare<sup>2</sup>, Mugdha Kowli<sup>1</sup>, Smita Sawant<sup>3</sup>, Dnyanesh Belekar<sup>1\*</sup>**<sup>1</sup>Department of Surgery, <sup>2</sup>Department of ENT, <sup>3</sup>Department of Pathology K. J. Somaiya Medical College & Research Centre, Sion, Mumbai-400022 (Maharashtra) India***Abstract:**

Goiter is a common presentation of neck swelling seen in surgical outpatient department. 20% of Goiter cases present with some form of malignancy. Primary lymphoma is relatively uncommon malignancy of the thyroid, comprising 0.6 to 5 per cent of thyroid cancers in most series. This rare form of non-Hodgkin's lymphoma seen in elderly female patient in clinical scenario, presented with relatively large goiter of non-Hodgkin's lymphoma.

**Keywords:** Thyroid, Non-Hodgkin, Lymphoma, Thyroidectomy

**Introduction:**

Although Non-Hodgkin's lymphoma frequently affects extra nodal sites; primary involvement of thyroid gland is very unusual. However, clinically this tumour may easily be confused with anaplastic carcinoma of thyroid. Early diagnosis with biopsy and treatment with chemotherapy supplemented with or without radiotherapy improves prognosis and may be potentially curative.

**Case Report:**

68 years old married female hailing from Rajasthan presented with swelling in front and left side of neck for the previous 5 months which progressively increased in size to attain its present dimensions. Patient complained of difficulty in

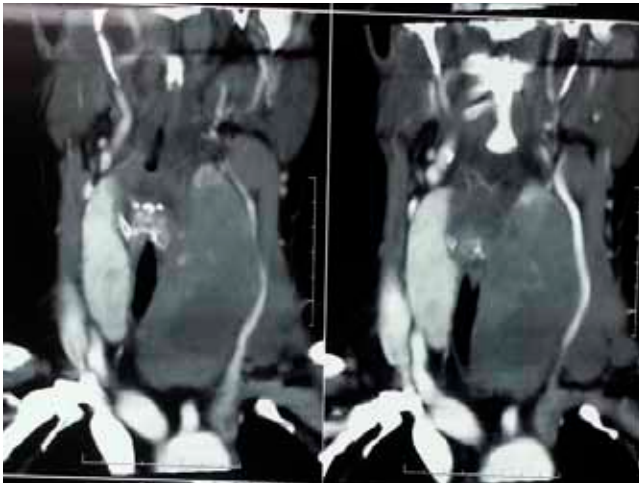
breathing and sensation of heaviness in the front of the neck while lying down. She had difficulty in swallowing food along with hoarseness of voice. Patient was a hypertensive and on medications since 10 years. General examination was unremarkable. On local examination, there was a diffuse swelling situated in the anterior aspect of neck to left of midline and in inferior half measuring approximately 10cms x 7cms x 3 cms with a well-defined margin, ovoid in shape with nodular surface and a hard consistency.



**Fig. 1: Large Left Lobe of Thyroid with Multinodular Appearance**

Swelling was fixed to underlying structures, non-mobile with trachea deviated to right side. On investigation, all blood reports and patient's thyroid profile was within normal limits. Radiologically, the X-ray Neck [Antero-

posterior and lateral view] showed tracheal deviation to right side. Ultrasound neck showed heterogeneous echo texture in left lobe which was grossly enlarged with thick capsule. A computed tomography (CT) of neck confirmed all the above findings plus it showed displacement of carotid artery laterally with gross tracheal deviation to right and few lymph nodes at level 2 & 3.



**Fig. 2: CT Scan Showing Large Left Lobe Displacing Carotid Artery [Arrow Pointing].**

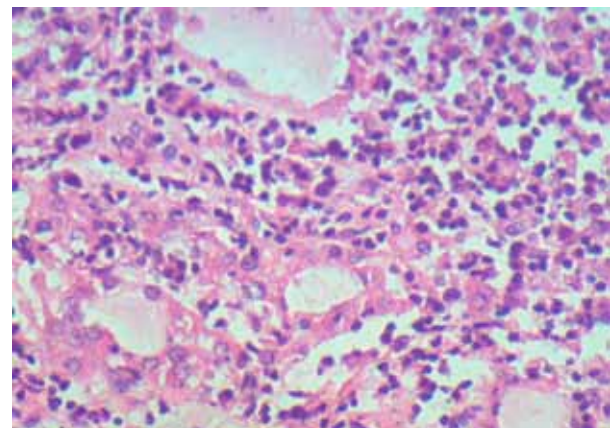
FNAC of left thyroid swelling and left cervical lymphnode was done and report stated lymphocytic thyroiditis. In view of repeated breathing difficulty and rapidly enlarging left lobe a decision to do neck exploration was taken with help of ENT surgeon. After proper anesthetic evaluation patient was taken up for surgery. Intra-operatively the tissue planes were indistinct. Strap muscles were adherent to thyroid gland. Thyroid tissue was extremely hard and friable during dissection. Left and right lobe of thyroid gland completely removed. A suction drain was kept and incision closed in layers. The drain

was removed on 5<sup>th</sup> postoperative day. Patient's general condition and her voice improved considerably.



**Fig. 3: Lateral view showing Hard and Deformed Left Lobe of Thyroid**

The left lobe of thyroid was sent for frozen section and histopathology report suggested Non-Hodgkins lymphoma involving the thyroid. The right lobe of thyroid's histopathology report described features suggestive of lymphoma arising in the background of Hashimoto's thyroiditis.



**Fig. 4-HPE Slide Showing Lymphoma Cells with Thyroid Follicle in Background (40X)**

Immunohistochemistry [IHC] was suggestive of tumor positive for CD20 and Bcl2 and focally positive for MUM-1 while negative for CD3. MIB-1 labeling index is approximately 80%-90%. On basis of histopathology report, we had advised CT scan thorax and abdomen to evaluate the extent of NHL. Patient's relatives were arranging the money for the same but we lost the patient on follow up. Post operative period was uneventful patient discharged on 10<sup>th</sup> post-operative day. Patient was asked to follow up regularly however 1 week later patient went to her native place, where she died due to unknown reason which her son informed us.

#### **Discussion:**

Thyroid lymphoma is a rare clinical entity and constitutes 5% of thyroid malignancies and less than 2% of all extranodal lymphomas [1]. There is a marked female preponderance with a sex ratio of 8.4:1. The mean age is between 60-65 years. It usually presents as a rapid enlargement of a painless goiter and is usually associated with pressure symptoms. It is very common to confuse it with anaplastic carcinoma of thyroid. The goiter tends to be stony hard, nodular and is fixed to superficial and deeper structures. On radio-isotope thyroid scan it is cold. Hashimoto's thyroiditis appears to be a risk factor though the association is not completely understood [2,3]. Majority of patients are hypothyroid and 80% have either thyroglobulin or microsomal antibodies or both. A recent epidemiologic study shows a 67 fold increase risk of thyroid

lymphoma in patients with chronic lymphocytic thyroiditis [3]. Clinical diagnosis is very difficult and surgery is still performed both to excise the tumor and/or obtain a tissue diagnosis [2]. The safety, simplicity, cost effectiveness and patient's compliance are important advantages of needle biopsy but it involves the expertise of an experienced cytologist who can interpret the results confidently as the differentiation from Hashimoto's thyroiditis can be difficult [4]. Primary thyroid lymphomas constitute 2.5-7% of all extranodal lymphomas [5]. The majority of these neoplasms are B-cell lymphomas and large-cell type, and rarely T-cell type [6]. The association between NHL and Hashimoto's thyroiditis has been reported between 30% and 70%. The prognostic factors include tumour bulk, mobility of the goiter, presence of retrosternal extension and extracapsular infiltration. Symptoms of severe local compression are also associated with poor prognosis. 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 [7-10]. The role of surgery in the management of thyroid lymphoma remains debatable. Chemotherapy with or without consolidating radiotherapy gives a five years survival in between 80% and 85% [2-5]. The possibility of thyroid lymphoma should be considered in any patient with rapidly enlarging goiter or in whom anaplastic carcinoma has been diagnosed. 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 [10]. Obstruction or compression of the trachea may require isthmusectomy or thyroidectomy. Because of high incidence of lymphoma, patients with Hashimoto's thyroiditis should be advised to report changes in the nature of thyroid swelling straightaway. IHC studies are useful in diagnosis and excluding anaplastic carcinoma, B-cell Chronic Lymphocytic

Leukemia (B-CLL), mantle-cell lymphoma and follicle-center lymphoma. MALT lymphomas express B-cell-associated surface antigens CD20, CD22 and CD79a, and are CD5-, CD10-, and CD23-negative [5, 6]. In our case, on fine needle aspiration, it was diagnosed as lymphocytic thyroiditis, frozen section showed it to be lymphoma. Due to the complaint of difficulty in breathing and swallowing, hoarseness of voice, total thyroidectomy was done. Histopathology showed diffuse large B-cell lymphoma and IHC was confirmative.

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