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**CASE REPORT****Extranodal Non-Hodgkin's Lymphoma of Base of Tongue – Diagnosis by Fine Needle Aspiration Cytology***Jaya Manchanda<sup>1\*</sup>, Ritu Gogia<sup>1</sup>, Abhishek Tiwari<sup>1</sup>**<sup>1</sup>Moolchand Medcity Hospital, New Delhi-110024 (Delhi) India*

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**Abstract:**

Waldeyer's ring is the primary site of Non-Hodgkin's Lymphoma (NHL) involvement in approximately 5 to 10% of all lymphoma patients. Of all Waldeyer's ring NHLs, the tonsil is the most frequent site, followed by the nasopharynx. Lymphomas arising from base of the tongue are less frequent, accounting for 7% of all primary Waldeyer's ring NHLs. The possible differential diagnosis includes Squamous Cell Carcinoma (SCC), which is the most common malignancy of the tongue base, salivary gland malignancy, (adenoid cystic carcinoma or mucoepidermoid carcinoma) and infection processes, such as tuberculosis. Here we present a case of 43 year old male presenting with mass lesion of the base of tongue and odynophagia. The diagnosis was initially made by fine needle aspiration of this lesion. Subsequent imaging investigations revealed a lobulated mass infiltrating bowel loop in the right iliac fossa. Histopathological and immunohistochemistry tests for both lesions confirmed extra-nodal, primary NHL B-cell diffuse, large cell type.

**Keywords:** Non-Hodgkin's Lymphoma, Squamous Cell Carcinoma, Waldeyer's ring

**Introduction:**

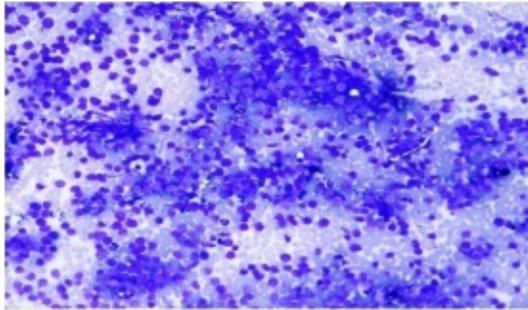
Lymphomas represent the third most common group of malignant lesions of the oral region, following SCC and salivary gland neoplasm, their incidence is only 3–5% of which NHL of the tongue is extremely rare [1]. NHL presenting initially with oral symptoms is fairly uncommon [2]. Here, we present a case of primary lymphoma

of the base of the tongue that was misdiagnosed clinically as SCC. Fine Needle Aspiration Cytology (FNAC) of the lesion suggested the diagnosis which was later confirmed by histopathology and Immunohistochemistry (IHC) study. FNAC along with immunophenotyping and molecular studies have gained acceptance in many centres as initial diagnostic tools in diagnosis of lymphomas [3].

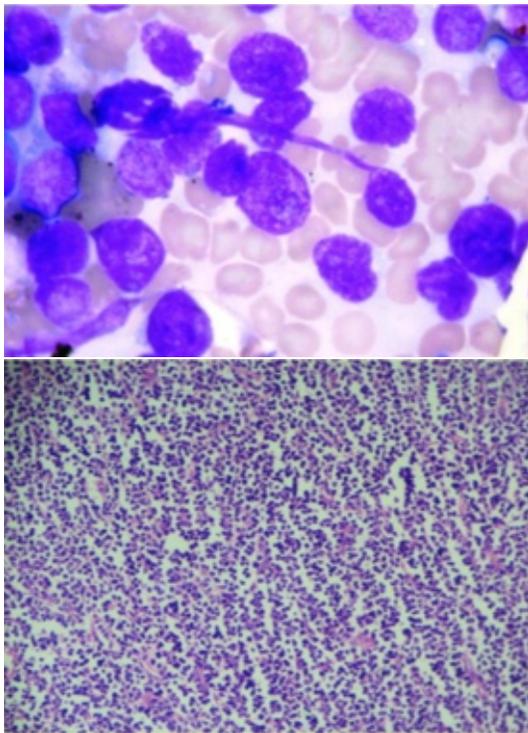
**Case Report**

A 43-year-old male patient presented with odynophagia and a gradually progressive lesion of five months over base of the tongue. He had no history of fever, weight loss, night sweats, hoarseness of voice and/or pain. Oral examination and digital palpation revealed 3x3 cm nodular growth extending from base of the tongue to the right tonsillo-lingual sulcus and to the right vallecula. The lesion did not bleed on touch. There was no obvious asymmetry of the tongue base. The mobility of the oral tongue was unaffected. Overlying mucosa covering the swelling was smooth. Tonsil, oropharynx and neck were normal and free from growth. Cervical lymph nodes were not palpable. Hematological investigations including bone marrow were normal. Human immunodeficiency virus was non-reactive. Fine Needle Aspiration Cytology (FNAC) showed high cell yield comprising of individually

scattered monotonous population of large lymphoid cells having round to oval nucleus with irregular nuclear margin, open chromatin and 1-3 variably sized nucleoli. Cytoplasm was pale blue and scant with a few cells showing vacuolation. Background showed lymphoid globules, plasma cells, neutrophils, tingible body macrophages and RBCs (Fig 1 and 2).



**Fig.1: FNAC showing Monotonous Population of Lymphoid Cells**



**Fig 2: FNAC Smear showing Malignant Lymphoid Cells (100x) and Histopathology Section Showing Extranodal NHL**

Based on the cytological features, a diagnosis of primary NHL was made. Subsequent abdominal computed tomography scan revealed a lobulated mass infiltrating bowel loop in the right iliac fossa which was surgically removed. Gross specimen for the same is documented below (Fig 3).



**Fig.3: Large Caecal Growth Involving Ascending Colon**

Histopathological examination of the growth at the base of the tongue and the abdominal lump revealed similar cytomorphological features. The histopathological section showed abundant neoplastic cellular infiltrate comprising of cells with round to oval large prominent nuclei, irregular nuclear margins with scanty deep blue cytoplasm. The nuclear chromatin was fine with occasional mitotic figures. Necrosis and hemorrhage were observed (Fig 2). On IHC the tumor cells were positive for CD19, CD20 and negative for CD3. A final diagnosis of extra-nodal (EN), primary NHL B-cell diffuse, of mixed large cell type was made.

**Discussion:**

The head and neck is the second most common region for extranodal lymphoma after the gastrointestinal tract [4]. Primary malignant

lymphoma of the tongue is rare; we could find only eight cases of primary tongue lymphoma reported in English [4, 5].

Wolvius *et al* noted only one case of NHL of the tongue in 34 primary oral EN NHL[2]. Similarly, Taouboul *et al* reported just one case of NHL of the tongue in 35 cases of head and neck NHL [2]. Khan *et al* have studied 77 cases of EN NHL by FNAC, out of which only 3 cases were in the oral cavity mainly involving the tonsil and one from the palate; there was no tongue involvement in his study [6]. Jovanovic *et al* described another case of primary NHL of base of the tongue in a 58-year-old patient presenting with growth in the throat which was of B-cell origin diagnosed by biopsy and not by FNAC [7]. Oral lymphoma of the tongue is very uncommon, it should always be considered in differential diagnosis of various

benign and malignant lesions in this region because treatment and prognosis of this condition is different. Differential diagnosis includes metastatic tumors in the tongue, melanomas, poorly differentiated squamous cell carcinomas, poorly differentiated adenocarcinomas, and rare tumours such as neuroblastomas, rhabdomyosarcomas and Ewing's tumour[5]. FNAC is very helpful in the early diagnosis of these cases for planning the management[2].

### Conclusion:

Lesions of tongue can present as a wide spectrum of benign and malignant clinical entities. A methodical clinical evaluation, simple procedure like FNAC, histopathological and radiological correlation can aid in the diagnosis and early and accurate management of the patient.

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