Primary non-Hodgkin's lymphoma of the oral tongue

GOPAL KRISHNA MAHESHWARI¹, HARSHAD ACHARATLAL BABOO¹, NILESH MANUBHAI SHAH², MAHESH HIRJIBHAI PATEL³, RAKESH SHAH⁴

Departments of ¹Radiation Oncology, ²Pathology, ³Surgical Oncology and ⁴Medical Oncology, The Gujarat Cancer and Research Institute, Ahmedabad-India

Primary non-Hodgkin's lymphomas of the oral region are extremely rare. Only 12 cases of non-Hodgkin's lymphoma of the oral tongue have been reported in the literature (1-6). We describe a 30-year-old woman, who presented with a mass lesion primarily involving the oral tongue and diagnosed as diffuse large T-cell non-Hodgkin's lymphoma. The patient was successfully treated with wide excision of the lesion followed by chemotherapy and radiotherapy. She remained disease free 22-months after the diagnosis and 15-months following completion of treatment. This is the first case of non-Hodgkin's lymphoma of the oral tongue being reported from India. [Turk J Cancer 2001;31(3):121-124]

Key words: Non-Hodgkin's lymphoma, oral tongue, extra-nodal lymphoma

Case Report

A 30-year-old woman presented with a history of a slowly growing painless swelling on right side of the tongue for five months. She had no other symptoms. Local examination revealed a 2x2 cm hard, nodular lesion involving the lateral margin of right half of the oral tongue (Figure 1). The mobility of the oral tongue was unaffected. Other parts of the oral cavity, oropharynx and neck as well as rest of the physical examination was normal. Her routine investigations including complete hemogram, urine analysis, chest X-ray and OPG (ortho-pantomogram) were normal. Biopsy of the lesion on histopathological examination demonstrated atypical large lymphoid cells infiltrating the skeletal muscles of the oral tongue (Figure 2). These cells had cleaved nuclei, moderate amount of eosinophilic cytoplasm, coarse chromatin and inconspicuous nucleoli. Moderate eosinophilic inflammatory infiltrate was also present in the background.

A diagnosis of diffuse non-Hodgkin's lymphoma was given. Immunohistochemical evaluation showed positive immunoreactivity for LCA (leukocyte common antigen), PAN-T (CD-3) and negative reaction with PAN-B (CD-20), cytokeratin (CK), AE1, Vimentin, S-100 and HMB-45. The patient was
extensively investigated for other sites of involvement. Bone marrow aspiration, CSF examination, abdominal CT scan and ultrasonography were performed. No other sites in the body were found to be involved by the disease. Thus, a final diagnosis of the primary non-Hodgkin’s lymphoma, diffuse large cell type, T cell variety of the oral tongue was established and her disease was staged as I-E. She was HIV negative. Wide excision of the lesion was performed. All margins of the resection were free of the disease but base was involved. Lymphovascular invasion was absent. The patient was given six cycles of CHOP (Cyclophosphamide, vincristine, adriamycin and prednisone) chemotherapy followed by radiotherapy by parallel opposed lateral beams encompassing the orocervical region. She received 50 Gy in 25 fractions over a period of five weeks by 6 Mv photon beam on linear accelerator. There was moderate radiation reaction close to the completion of radiotherapy treatment. She currently remains disease free 22-months after diagnosis and 15-months following completion of treatment.

Fig 1. Pre-treatment clinical photograph of the patient

Fig 2. Micro-photographs of the lesion showing atypical large lymphoid cells infiltrating the skeletal muscle of the tongue. Moderate eosinophilic infiltrate is also noted in the background (A: H&E X100, B: H&E X400)
Discussion

Non-Hodgkin's lymphomas are a group of highly diverse malignancies and have great tendency to affect organs and tissues that do not ordinarily contain lymphoid cells. 20 to 30% of non-Hodgkin's lymphoma arise from extranodal sites (7). The head and neck is the second most common region for extranodal lymphoma after gastrointestinal tract (8,9). Among various head and neck sites, Waldeyer's ring, which is an area encompassed by the nasopharynx, the tonsil and the base of the tongue is most often involved by malignant lymphoma (10,11). The nose and paranasal sinuses, orbit(s), salivary glands are other sites in head and neck affected in descending order of frequency (12). Involvement of various parts of the oral cavity is very uncommon (4,10). The gingiva and the hard palate are the most often involved intraoral sites (13). Involvement of buccal mucosa, oral tongue, floor of mouth and lip(s) has been reported quite infrequently. To date, only 12 cases of the non-Hodgkin's lymphoma of the oral tongue has been mentioned in the literature (1-6). This is the first case of non-Hodgkin's lymphoma of the oral tongue being reported from India.

Little is known about the etiological factors for primary lymphoma of the oral region. Few cases of oral lymphomas have been reported in association with Acquired Immune Deficiency Syndrome (AIDS), and it may even be the first presentation of the disease in certain individuals (14-16). It generally affects the elderly, especially over the 6th decade of life (17). Our patient was 30-year-old woman. There are no characteristic clinical features of non-Hodgkin's lymphoma of the oral region. The most common presenting symptoms are local swelling, pain or discomfort and ulcer. The oral non-Hodgkin's lymphoma may mimic more commonly benign oral and dental pathologic conditions (10). Thus, these lesions may be easily misdiagnosed. Awareness of this clinical entity in the oral region is important because lymphomas and more common malignant lesions such as carcinomas can not be differentiated clinically. Most of the head and neck non-Hodgkin's lymphomas including oral lesions are of B-cell origin and diffuse large cell type being the most common (18). The present patient had diffuse T-cell variety, large cell type non-Hodgkin's lymphoma.

The paucity of cases makes the understanding of the biological behaviour and therapeutic options of lymphoma involving the oral region difficult. Like lymphomas at other head and neck sites, oral lesions also seem to be quite sensitive to both radiotherapy and chemotherapy. Our patient was treated with chemotherapy and radiotherapy following excision of the lesion as histopathology proved it to be a high grade lymphoma. She remained without evidence of disease 15-months after her treatment. The overall prognosis of non-Hodgkin's lymphoma is related to the stage of tumor and aggressiveness of the malignant cell type. In conclusion, though non-Hodgkin's lymphoma involving oral region is uncommon, it should always be considered in differential diagnosis of various benign and malignant lesions in this region, because the treatment and prognosis for these conditions are quite different. A proper clinical evaluation, histopathologic as well as immunohistochemical evaluation of biopsy specimen may aid in the diagnosis and thus, help in proper management.
NON-HODGKIN’S LYMPHOMA of the TONGUE

References