NON-HODGKIN'S LYMPHOMA OF THE PALATE

- A *Case Report*

Introduction:

The number of people living with HIV worldwide continued to grow in 2008, reaching an estimated value of 33.4 million [31.1 million–35.8 million]. The total number of people living with the virus in 2008 was 20% higher than the number in 2000, and the prevalence was roughly threefold higher than in 1990. The latest epidemiological data indicate that globally the spread of HIV appears to have peaked in 1996, when 3.5 million [3.2 million–3.8 million] new HIV infections occurred. In 2008, the estimated number of new HIV infections was approximately 30% lower than at the epidemic's peak 12 years earlier. India accounts for roughly half of Asia's HIV prevalence as estimated by UNAIDS reports on the global epidemic 2009 [1]. In 1981, homosexual men with symptoms of a disease that now are considered typical of the acquired immunodeficiency syndrome (AIDS) were first described in Los Angeles and New York. The men had an unusual type of lung infection (pneumonia) called *Pneumocystis carinii* (now known as *Pneumocystis jiroveci*) and rare skin tumors called Kaposi's sarcomas. The patients were noted to have a severe reduction in a type of cell in the blood that is an important part of the immune system, called CD4 cells. These cells, often referred to as CD4 T cells, help the body fight infections [2]. In 1983, researchers described the virus that causes AIDS, now known as the Human Immunodeficiency Virus (HIV) and belonging to the group of viruses called retroviruses [3]. Apart from the common bacterial, viral and fungal infections most common neoplasm of the oral cavity in HIV sero positive individuals is NHL. NHL is important neoplasm as it is considered as one of the AIDS defining

condition. Here, we report a case of Non Hodgkin's Lymphoma in HIV sero-positive individual who presented with primary involvement of hard palate.

Case report:

A 35-year-old male was referred to the Department of Oral and Maxillofacial pathology, SIBAR Institute of Dental Sciences for swelling and pain in the maxillary left back jaw since 3 months. Past medical history revealed hospitalization one month back due to frequent episodes of fever, abdominal pain and weight loss. Ultrasound of abdomen was performed which was suggestive of Grade I renal parenchymal changes. His child and wife are apparently healthy. On examination his vital parameters were stable. Mild pallor was present. Extraoral swelling measuring about 3X 4cm, roughly oval shaped with ill defined borders was seen on the left mid face region. Palpation revealed no local rise in temperature and a non tender swelling. A single left sub-mandibular lymphnode measuring about 1X1cm, roughly oval shape, was tender on palpation. On intraoral examination an ulceroproliferative growth measuring about 3 X 3.5 cm was seen on the left hard palate which was extending from gingiva of left maxillary canine to second molar antero-posteriorly, mesio-laterally crossing the midline of the hard palate and was firm and tender on palpation. Oral pantomograph showed a diffuse radiolucent area extending from maxillary left lateral incisor to the second molar region. A provisional diagnosis of Oral Squamous cell carcinoma was given. As a routine protocol blood investigation was performed. Peripheral smear showed leucocytosis (1300 cells/cu.mm), mild thrombocytosis (4.7 lakhs/cu.mm), and ELISA positivity. For confirmatory diagnosis western blot was performed which showed positivity and the patient was diagnosed as HIV sero- positive. CD4+ count showed 180 cells/µL. Chest X-ray (PA View) showed normal findings. Safety measures were taken and incisonal biopsy was performed in the

maxillary left vestibular region. Histopathological examination of the lesion revealed connective tissue stroma with immature round cells showing dysplastic features like nuclear pleomorphism, prominent nucleoli, increased and abnormal mitotic figures and granular cytoplasm. Immunohistochemical analysis was performed for confirmatory diagnosis which showed negative expression for Cytokeratin, CD 20 and positive expression for LCA (leucocyte common antigen) and CD 3 suggestive of T-cell Non-Hodgkin's lymphoma. Bone marrow aspiration and biopsy was performed on right posterior iliac crest. Bone marrow aspiration showed normal erythropoiesis, myelopoiesis and adequate megakaryocytes. Bone marrow biopsy showed involvement by lymphoma.

Discussion:

The close association of NHL with HIV infection is formally recognized by the fact that NHL is designated as an Acquired Immune-Deficiency Syndrome (AIDS) defining condition [4]. The NHL most commonly originates from cells of B-Lymphocyte series [5]. T lymphocyte derivations are less common. In our case the immunohistochemical analysis showed positivity for CD3 suggesting T cell lymphocyte series. The prevalence of lymphoma is increased in patients who have immunological problems especially AIDS [5]. HIV-related lymphomas are monoclonal and are characterized by genetic abnormalities involving oncogenes MYC, BCL-6 and the tumor suppressor genes [6]. Non-Hodgkin's lymphoma is the second most common malignancy associated with HIV infection, only with 3% to 5% of patients presenting with Non-Hodgkin's lymphoma as their first manifestation of AIDS [7]. In AIDS the relative risk for a low grade NHL is 15 times greater, compared with a 400 times greater risk for high-grade NHL [5]. In many

instances Oral involvement is simply a manifestation of disseminated disease. The age group affected by NHL related to AIDS is considerably younger than that of unrelated NHL [4]. In our case also the patient was 35 years old. Oral lesions are seen in approximately 4% of patients with AIDS–related NHL and most frequently involves gingiva, palate, tongue tonsil or maxillary sinus [5]. In our case the patient showed involvement of involvement of palate and gingiva. The oral lesions are characterized by swellings which may grow rapidly and then ulcerate. Pain is a variable feature. When underlying bone is involved, tooth mobility and pain may develop [6]. The risk of developing NHL in HIV sero positive individuals is 60% greater when compared with healthy individuals [7]. Although lymphomas represent third most common group of malignant lesion of oral region following squamous cell carcinoma and salivary gland neoplasm, their incidence is only 3-5%. The patient was referred Indo-American cancer institute for further treatment. The treatment usually is combination of chemotherapy (CHOP regimen [4]) and radiation for local control of disease. The oral manifestations of HIV infection have changed because of the advent of HAART. Many opportunistic infections and neoplasms have resolved or fail to occur as a result of an improved immune system. The effect of NHL appears to vary with its type especially plasmablastic lymphoma has declined significantly.

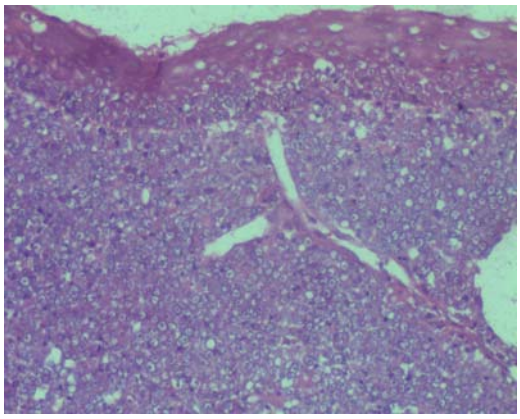
Conclusion:

A person with AIDS is immunocompromised and can present with any of the lesions or conditions and even oral lesion as initial sign of the underlying AIDS. NHL is one of the frequently presenting conditions among AIDS patient and may present as oral lesion in these patients. Hence, such patients should undergo investigations for underlying condition (i.e HIV, if any) by available tests. The

treatment in these patients involves treatment of NHL with chemotherapy with continuation of ART. The prognosis of NHL is related to the stage of the tumor, the aggressiveness of the malignant cell type, and the response to treatment.

Extra-oral swelling

Intra-oral picture



10 X view

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