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CASE REPORT

PRIMARY EXTRANODAL NONHODGKIN'S LYMPHOMA OF PALATE IN A HIV-POSITIVE PATIENT: A CASE REPORT

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ABSTRACT

Non-Hodgkin's Lymphoma belongs to group of lymphoid neoplasm, which may be a presenting symptom in HIV patient who is immuno-compromised. The close association of NHL with HIV infection is formally recognized by the fact that NHL is designated as an Acquired Immuno Deficiency Syndrome defining condition. Oral involvement primarily is not so common in these patients but if involved, they often involve gingiva or palatal region. Here we report a case of Non Hodgkin Lymphoma (NHL) with HIV who presented with primarily involvement of palate by NHL.

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INTRODUCTION

The rapid spread of the AIDS since it first appeared in 1981 has not only created concern among the general population, but has resulted in drastic changes in life styles and the manner in which medical and dental treatment is performed (Hernández Vallejo, 1989). In 1983 the causative agent of this condition was identified as a retrovirus and was subsequently given the delineation of HIV (Human Immuno Deficiency Virus). This virus makes T cells as its primary targets and leads to progressive loss of these cells. This leads to immunosuppression and makes the affected individual susceptible to various unusual infections and neoplasms (Greenberg, 2003). Some neoplasms are associated with AIDS like Kaposi's sarcoma and Non Hodgkin Lymphoma (NHL). NHL is very important as it is considered as one of the AIDS defining condition. HIV patients often present first with lymphadenopathy which may turn out to be NHL. On investigation the HIV status of these patients are revealed subsequently. Oral involvement primarily is not so common but if involved, they often involve gingiva or palatal region. Here we report a case of Non Hodgkin Lymphoma (NHL) with HIV who presented with primarily involvement of palate by NHL.

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CASE REPORT

A 45-year-old male patient was reported to our department with the chief complaint of growth on left side of roof of mouth since 1 month [Figure 1]. Patient was apparently all right a month back then he noticed the peanut sized growth, which gradually increased to present size. It was associated with mild intermittent pain and bleeding, with associated difficulty in speech and chewing. No history of dysphagia or paresthesia was noted The burning sensation was present on having hot and spicy food since a week. Personal history revealed smoking approximately 20 cigarettes a day since 20 years and he was also a known alcoholic for the same period. He also had history of prior consultations with medical practitioner 2 weeks back, was advised to take antibiotics and do some blood investigations. Even after 5 days of medication, the swelling remained, consequently he was diagnosed as HIV positive with CD4 count of 371(1 week back).He was not under ART at the time. His medical and family histories were non contributory. On general examination he was moderately built and nourished, with stable vital parameters. Mild pallor was present. There was no regional lymphadenopathy. On intraoral examination a well defined solitary lobulated reddish ovoid swelling was seen in the left side of the palate measuring approximately about 5cm x3cm extending from distal aspect of 26 up to distal aspect of maxillary tuberosity antero-posteriorly and medio-laterally 1cm from midline of palate to the free

gingival margin of 26 to 28 region. Surrounding mucosa appears to be normal. On palpation it was non-tender, soft to mildly firm in consistency with smooth surface and well defined margin. Easily bleeds on palpation. Other findings were mesial proximal caries in 15, cervical abrasion in 14, 24, 25, and generalized stains and deposits with severe halitosis.

Based on the clinical findings, positive history of habits and HIV, a provisional diagnosis of malignant neoplasm associated with HIV was made with the following conditions as differential diagnosis, i.e.:

- Peripheral giant cell granuloma
- Pyogenic granuloma
- Benign lymphoid hyperplasia
- Lymphoblastic leukemia
- Necrotising sialometaplasia and
- Minor salivary gland tumor.

In addition, the patient was subjected to the following investigations:

- Routine blood examination
- Radiograph-OPG
- Vitality test
- Incisional biopsy.

Except raised ESR (110mm/hr) other hematological investigations were normal. Radiograph [Figure 2] revealed normal bony trabeculae in 26,27 and 28 region. The teeth associated with lesion (26, 27, 28) showed positive response in vitality test. Histopathology [Figure 3] showed tissue lined by stratified squamous epithelium with focal pseudoepitheliomatous hyperplasia and ulceration. Subepithelial tissue shows a neoplasm composed of large round cells arranged in diffuse sheets. Cells show scanty to moderate cytoplasm, illdistict cell border, large round vesicular nucleus with prominent single nucleoli in most of them. A few plasmacytoid forms also noted. Chronic inflammatory cell infiltration noted near the ulcerate area. Stroma is scanty and shows ectatic blood vessels.

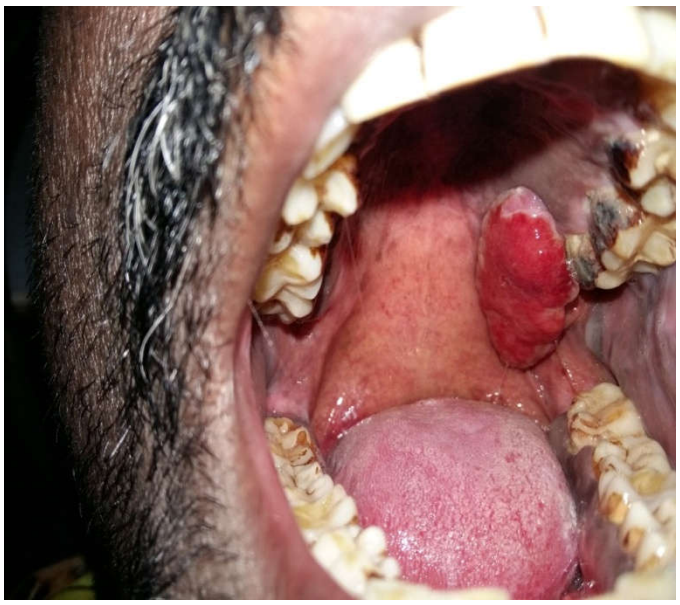

Figure 1. Intraoral picture showing the palatal mass

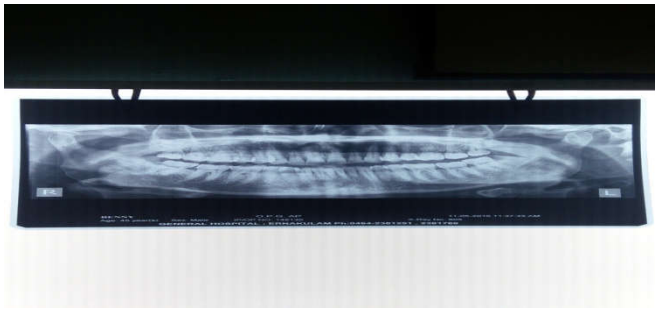

Figure 2. OPG revealing normal bone architecture in relation to maxillary molars

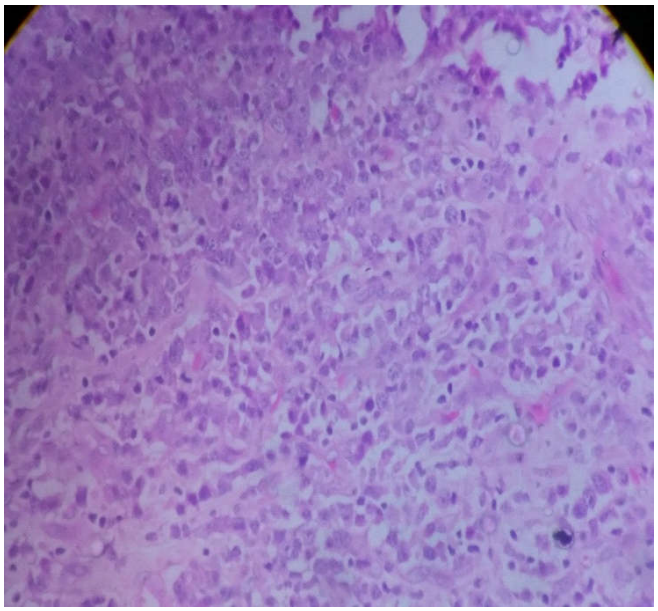

Figure 3H&E, (hematoxylin and eosin), composed of large round cells arranged in diffuse sheets, with scanty to moderate cytoplasm, illdistict cell border, large round vesicular nucleus with prominent single nucleoli in most of them.

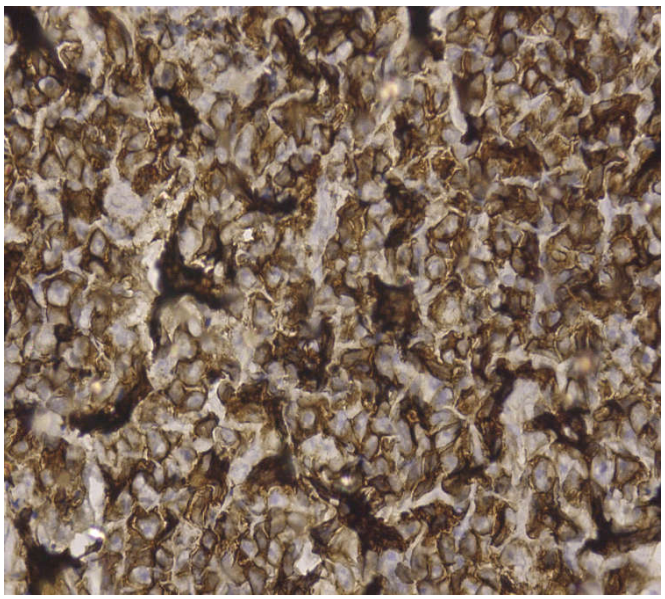

Figure 4. Photomicrograph IHC(40X) neoplastic cells showing strong positivity to CD20

Reticulin study shows condensation of reticulin fibers around individual neoplastic cells. Based on these findings a diagnosis of high grade Non Hodgkins lymphoma (NHL) was given. For further confirmation of NHL immunohistochemistry was

advised. Immunohistochemistry [Figure 4] was positive for CD20 marker and was suggestive of B cell lymphoma. He was referred to the oncologist. The oncologist confirmed that the lymphoma was localized to the left posterior palate only, without any diffuse disease or nodal involvement. He was categorized as stage IAE primary maxillary NHL. The patient was started on anti-retroviral treatment. Chemotherapy was advised by the oncologist and a total of three cycles were suggested at the gap of every 3 weeks. The treatment regimen followed was that of classical CHOP therapy which comprised of using cyclophosphamide, doxorubicin (hydrodoxorubicin), vincristine (oncovin), and prednisolone. At the end of two cycles the swelling started regressing in size and totally disappeared after three cycles.

DISCUSSION

Lymphomas are a diverse group of neoplasms affecting the lympho-reticular system. Lymphomas have been traditionally divided into Hodgkin's disease and non- Hodgkin's disease. Hodgkin's disease often presents as nodal disease, commonly involving cervical, axillary, and inguinal nodes, whereas non-Hodgkin's disease may develop extra-nodally, outside the lymphoid system and can occur in stomach, salivary glands, and rarely in oral cavity and jaws (Kini, 2009). The exact etiology of lymphomas is unknown however genetic predisposition, immunodeficiency state like HIV, recipients under transplantation and chromosomal translocation has been implicated (Mahima, 2012). Lymphomas are second only to squamous cell carcinoma in the frequency of malignant neoplasms involving the soft tissues of head and neck region, which usually affects the lymph nodes. NHL are a group of highly diverse malignancies and have great tendency to affect organs and tissues that do not ordinarily contain lymphoid cells. Twenty-thirty percentage of NHL arise from extra-nodal sites (Sankaranarayanan, 2005). The head and neck is the second most common region for the extra-nodal lymphoma, the first being the gastro intestinal tract (Sankaranarayanan, 2005). NHL rarely manifests as a primary malignancy in the head and neck region of >1% and may give an important clue for undiagnosed HIV infection (Pratibha, 2004). Among various head and neck sites, Waldeyer's ring, which is the area encompassed by the nasopharynx, tonsil, and base of the tongue, is the most often involved by malignant lymphoma. The nose, para-nasal sinuses, orbit and salivary glands are the other sites affected in head and neck region. Involvement of the oral cavity is not common. The maxilla is affected more commonly than the mandible (Sankaranarayanan, 2005). Palate and gingiva account for almost 70% of lesions in maxilla (Eisenbud, 1984 and Slootweg, 1985) as seen in our case.

It more commonly affects the middle aged and the elderly (40-80 yrs) with slight male predilection with a male to female ratio of 3:2 (Kini, 2009). There is reversal of the incidence of NHL among young HIV-positive patients. HIV patients are at 60 times higher risk than the general population and around 3% of HIV-infected people develop lymphomas (Sankaranarayanan, 2005). In our case, patient was only 45 years old with good general health. Secondary organ involvement along with the primary in the oral cavity is generally observed[5]but in our case there was no other involvement except for primary intraoral mass. Primary lymphoma of the bone was first described by Parker and Jackson as primary reticular cell sarcoma of bone (Kini, 2009). Clinical features of lymphoma of the oral region are not characteristic. They occur as local bony swelling, tooth mobility, painless inflammation of the mucosa with or without ulcerations, and rarely facial or dental pain. Additional observations include trismus, otalgia, gingival ulceration, sinusitis, or cervical lymphadenopathy (Kini, 2009 and Sankaranarayanan, 2005). In our case, the patient was aware of the slow growing swelling that was not painful and of short duration. Specific and evident radiological signs of bone involvement may be absent in 10-20% of cases. Our patient presented with mass over palate with no underlying bony destruction. The radiographic findings usually are those of periapical inflammatory processes or osteitis. Diffuse trabecular honeycomb images are occasionally observed. Those may be the images of cortical destruction and invasion of the maxillary sinus (Kini, 2009 and Sankaranarayanan, 2005). More aggressive B-cell lymphomas present with large abdominal or mediastinal masses (Mahima, 2012). The diagnosis is usually based on histopathological findings and advanced investigations like immunohistochemistry and the attributed markers for B cell lymphoma include CD 20, CD79a, MB2, CD30 (Harris, 2000 and Patil, 2010). Spencer et al reviewed 40cases where Pan B cell markers (CD20, CD79a) established B cell lineage in 39 cases (Kemp, 2008).

In our case immunohistochemistry was positive for CD20 marker and was suggestive of B cell lymphoma. NHL can be managed by chemotherapy, radiotherapy, and surgery in various combinations.NHL arising in bone is best treated by chemotherapy and may not require radiotherapy (Kini, 2009). Generally, a combination of chemotherapy (cyclophosphamide, doxorubicin, vincristine, prednisone) and field radiation is recommended for treatment. Monoclonal antibodies directed against antigens or within the lymphoma and injection of interferon have also been used (Pratibha, 2004). Radiotherapy in the range of 2400-5600cGy (35-40Gy) delivered in 180cGy daily fractions has proven successful in early cases (Mahima, 2012). Radioimmunotherapy has been employed as a new therapy for relapse cases. Yttrium90, Iodine131, ibritumomabtiuxetan are the currently used radioimmunoconjugates (Greenberg, 2008). Survival is excellent in localized disease, whereas disseminated disease seems less favorable (Lozada-Nur, 1996). The prognosis of the disease is good with a maximum of 5-year survival rate in 30% of cases after therapy. The disease may occasionally progress into a diffuse pattern with cutaneous nodules and plaques which undergo blast transformation or rarely turn into leukemia (Slootweg, 1985). Currently, the median survival rate of patients with AIDS related to lymphomas after treatment is 5-11months (Lozada-Nur, 1996). In contrast, the response of the non-HIV-positive population to aggressivechemotherapy in the absence of immuno-suppression has highly been effective; 65% to 85% experienced a complete survival response and 50% to 75% attained long-term survival (Lozada-Nur, 1996). Patients older than 60, with stages 3 and 4 and severe extranodal places of involvement will have an unfavorable prognosis.

Conclusion

In conclusion, though the NHL involving the oral region is uncommon, it should always be considered in the differential diagnosis of benign and malignant lesions in this region, because the treatment and prognosis of these conditions is quite different. Even though a dentist does not treat malignant lymphomas, he/ she may be the first to diagnose the lesion.

Thus dental surgeons indirectly form a part of the team that treats lymphomas. Morever, a thorough understanding of the disease process will enable the dental surgeon to treat the complications of the disease or its treatment such as candidiasis, mucositis, xerostomia, adverse drug reactions, and osteoradionecrosis.

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