Non-Hodgkin's Lymphoma Masquerading as Submandibular Sialadenitis

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ABSTRACT

Non-Hodgkin's lymphoma often presents outside the lymphoid system. Among the salivary glands, parotid is exclusively involved and it is extremely rare in submandibular gland. We report a case of non-Hodgkin's lymphoma in submandibular gland, which was initially managed as a case of chronic submandibular sialadenitis, but later on confirmed as non-Hodgkin's lymphoma after surgical excision and histopathological examination.

Keywords: Non-Hodgkin's lymphoma, parotid, submandibular, sialadenitis, histopathological examination

Approximately 25% of head and neck lymphomas are present in extranodal sites of pharynx, paranasal sinuses, nasal cavity, salivary glands, oral cavity, thyroid gland, central nervous system and larynx.[1] Primary lymphomas arising in salivary glands are very uncommon. These lymphomas represent 1.7% of all reported salivary neoplasms.[2] Majority of these lymphomas develop in the parotid glands (76%), but may also develop in submandibular gland (20%), sublingual glands (3%) and palatal glands (1%).[1-3]

Involvement of the salivary glands by Hodgkin's lymphoma is very rare. Combining data from four large series on primary lymphomas of the salivary glands, Hodgkin's lymphoma only accounted for 4% of all cases.[4]

Non-Hodgkin's lymphoma is more common than Hodgkin's lymphoma. Most cases of non-Hodgkin's lymphoma arising in salivary glands are of B-cell lineage. We report a similar case of non-Hodgkin's lymphoma in submandibular gland in a 35-year-old female.

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CASE REPORT

A 35-year-old female presented with a 3 months history of swelling in left submandibular region, which was associated with mild intermittent pain especially, while chewing. Similar episodes of pain also occurred in the past, which settled spontaneously. No other complaint of dry mouth, variable tear production or joint symptoms were present. Patient was non-alcoholic and nonsmoker and was not a known case of any other chronic illness such as diabetes mellitus or hypertension.

Examination revealed patient to be in good general health with an obvious, isolated left submandibular gland enlargement of size around 3 × 3 cm, which was having smooth surface with well-defined margins, nontender to touch and bimanually palpable. Lacrimal glands, both parotid and sublingual glands and right-sided submandibular gland were normal. There was no significant lymphadenopathy or hepatosplenomegaly. Per oral examination was normal. Systemic examination did not reveal any abnormal finding.

Investigations were as follows: Hemoglobin (Hb) - 12 g/dL, white cell count - 5.2 × 10^9/L with a normal differential count and erythrocyte sedimentation rate (ESR) of 20 mm/hr. Electrolytes, liver function tests and chest X-ray were normal. Fine-needle aspiration cytology report came out to be of chronic sialadenitis. Patient was given a course of antibiotics without any perceptible relief. Hence, submandibular gland was excised. At the operation, the gland was found to be enlarged but not locally adherent and

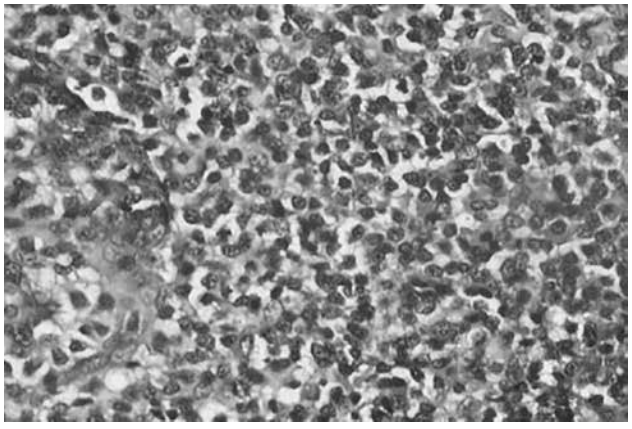

Figure 1. Photomicrograph showing diffuse infiltration of salivary gland by malignant lymphoid cells having large size, vesicular chromatin, prominent nucleoli with mitotic figures, which are destroying ductal epithelium (H&E 40x).

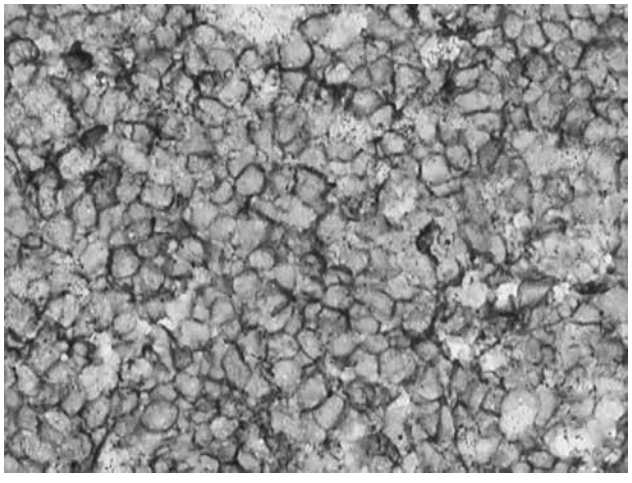

Figure 2. Photomicrograph showing CD-20 positivity in lymphoid cells (IHC CD-20, 400x).

was sent for histopathological examination, which revealed non-Hodgkin's lymphoma of B-cell type (CD-20 positive) in the background of chronic lymphoepithelial sialadenitis (Figs. 1 and 2).

The sutures were removed after a week; however, patient had pain and discomfort at the local site, which was unusual and is generally not associated with submandibular gland excision.

DISCUSSION

Batsakis and Regezi suggest three criteria for the diagnosis of salivary gland lymphomas: Extraglandular lymphoma must not be present; there is histological proof that the lymphoma involves the gland parenchyma and not the intraglandular lymph node; immunohistochemical screening must confirm the presence of lymphoma markers[5] as was also observed in our case.

Non-Hodgkin's lymphoma of the salivary glands usually presents as a painless, progressive enlarging mass. Almost all primary lymphomas of the salivary glands affect the parotid and these form almost 5% of all extranodal lymphomas.[5] In 10% of patients more than one gland is involved. This predilection for parotid gland may be due to presence of intraparotid lymph nodes and lymphoid follicles and their absence in submandibular and sublingual glands.[2] Almost 40% of lymphomas of the head and neck are of the salivary glands and nearly all of these are non-Hodgkin's lymphomas and well-differentiated.[6,7] These extranodal manifestations confuse the clinical diagnosis of masses presenting in the head and neck region. These tumors are initially seen by head and neck surgeons, who play an important role in initial diagnosis. B-cell immunophenotype can be confirmed by immunopositivity for CD-20.[4] This disease can remain localized to the salivary glands or be a part of Sjogren's syndrome. The association between Sjogren's syndrome and lymphoma have been recognized since 1964,[8] which was also present in our case. The risk of developing lymphoma in this syndrome is said to be 40 times that of normal population.[9]

The prognosis of salivary gland lymphoma is usually favorable; however, it depends upon the histological subtype and clinical stage. Tumors that are localized (stage IE) at the time of presentation and demonstrate low-grade histology have an excellent prognosis as was also observed in present case. With lymph node involvement (stage IIE), prognosis is usually similar to primary nodal low-grade β-cell lymphoma. Most salivary gland non-Hodgkin's lymphomas tend to remain localized and relapse locally. Therapeutically complete tumor resection and irradiation constitutes a suitable treatment modality for early stage tumors, with the addition of chemotherapy in advanced disease. This may be supported by findings that high-grade transformed mucosa-associated with lymphoid tissue (MALT) lymphomas recurred only after local therapy (surgery and irradiation), thus affecting patient survival. Salivary gland non-Hodgkin's lymphomas of other histological types are generally considered a systemic disease, suggesting that chemotherapy should be administered.[10] Recently, the use of rituximab, an anti-CD20 antibody has emerged as treatment option in patients with B-cell lymphomas.[11-13] Dunn et al described that the overall survival and relapse-free survival rates at 5 years were 95% and 51%, respectively;

thus salivary gland lymphoma is an indolent disease.[14] We would like to conclude that though submandibular gland lymphoma is very rare; however, it's possibility should be kept in mind whenever dealing with the swellings of submandibular glands.

Unusual postoperative pain and discomfort at the surgical site should alert the surgeon towards unusual pathology and surgical excision should always be followed by histopathological examination in every case.

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Tinnitus: Turning Down the Volume

The drug D-cycloserine was no more effective than placebo when used with a computer-based cognitive training program for relieving persistent ear ringing in patients with tinnitus in a small clinical study, but patients did report fewer cognitive difficulties.

Sixteen study participants with tinnitus were treated with D-cycloserine - the dextrorotatory form of the antibiotic cycloserine, which has been widely studied in conjunction with cognitive behavioral therapy for the treatment of anxiety and stress-related psychiatric disorders. Another 14 patients were treated with placebo and all 30 study participants took part in cognitive training sessions, conducted twice weekly for 5 weeks.