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Case Report

Diffuse large B cell lymphoma of submandibular gland in a seropositive case – a rare presentation

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ABSTRACT

Lymphomas account for 2%-5% of salivary gland neoplasms. The parotid gland is the most commonly involved, constituting 70% of the cases, followed by submandibular gland (25%), sublingual and minor salivary glands (<10%). In present study a 56 years old seropositive male presented with a submandibular gland swelling of 2 months duration; along with multiple cervical lymphadenopathy. Grossly a single, well encapsulated, grayish-white tissue measuring 3x2.5x2 cms was received. It was solid, grayish-white on cut section. Histology revealed features of diffuse large B cell lymphoma with myoepithelial sialadenitis. Immunohistochemistry showed positivity for LCA & CD20, thus confirming the histopathological diagnosis. Primary malignant lymphoma of salivary glands is uncommon. Inspite of malignant lymphoma being the second most common AIDS-associated neoplasm, it's occurrence in submandibular gland is extremely rare.

Keywords: Lymphoma, Seropositive, Submandibular gland

INTRODUCTION

Lymphomas account for 2%-5% of salivary gland neoplasms with mean age of 63 years.[1-4] The parotid gland is the most commonly involved, constituting 70% of the cases, followed by submandibular gland (25%), sublingual and minor salivary glands (<10%) Primary lymphoma of submandibular gland is relatively rare and occurs in 2%-5% of tumors. It has been reported that 80-85% of submandibular gland tumors are benign and 15-20% are malignant. 90% of salivary gland lymphomas present as firm painless swelling and more than 90% occurs in parotid gland. Generally, among lymphomas, non-Hodgkin's lymphoma is more common in submandibular gland, frequently B-cell type.[5-7]

Treatment of primary lymphoma of submandibular gland includes submandibulectomy, radiotherapy and/or chemotherapy depending upon the grade of tumor, clearance of margin and associated lymphadenopathy and pre-op confirmed diagnosis of lymphoma.[8]

CASE REPORT

A 56 years old seropositive male presented with a painless swelling in left side of neck of 2 months' duration. The swelling was fixed to the surrounding structures along with multiple cervical lymphadenopathy. There was no history of rapid increase of swelling. MRI of the swelling revealed a large heterogeneous lobulated mass in relation to the left submandibular gland.

Submandibular gland excision was carried out. Grossly a single, well encapsulated, grayish-white tissue measuring 3x2.5x2 cms was received. It was solid, grayish-white on cut section (Figure 1). Histology revealed features of diffuse large B cell lymphoma with myoepithelial sialadenitis (Figure 2 A and B). Immunohistochemistry

showed positivity for LCA and CD20 (Figure 3 A and B), thus confirming the histopathological diagnosis.

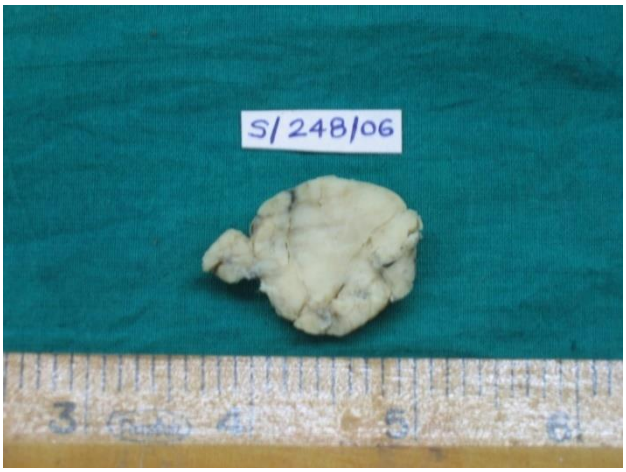

Figure 1: Cut section of the submandibular gland showing diffuse solid grey-white areas.

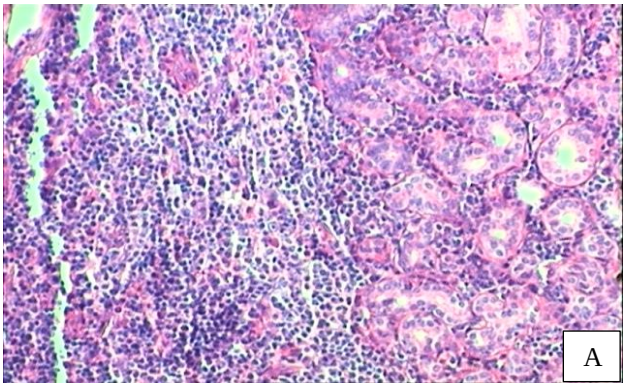

Figure 2A: Diffuse infiltration of the lymphoid cells amidst the serous & mucous acini (40X HE).

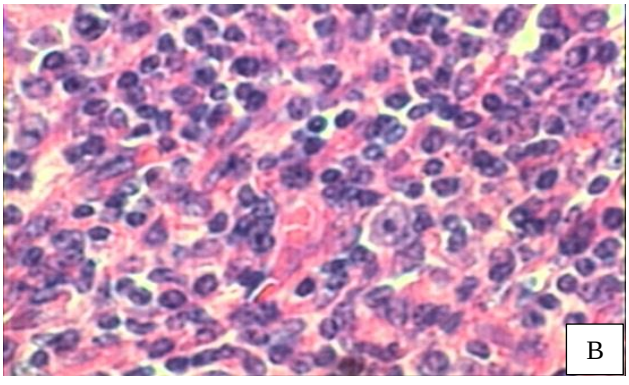

Figure 2B: Large lymphoid cells in sheets with round to ovoid nuclei, coarse chromatin & prominent nucleoli (400X HE).

After receiving the histopathology, USG abdomen and bone marrow study was done. There was no evidence of lymphadenopathy elsewhere in the body. There was no involvement of bone marrow with lymphoma.

Following these reports, patient was put on chemotherapy after which he was lost to follow up.

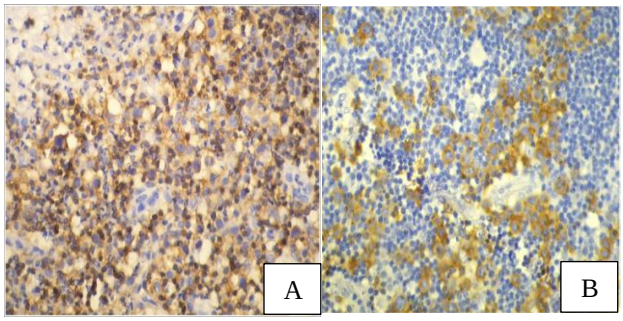

Figure 3: A) LCA+; B) CD20+.

DISCUSSION

Lymphomas account for 2%-5% of salivary gland neoplasms with mean age of 63 years. The parotid gland is the most commonly involved, constituting 70% of the cases, followed by submandibular gland (25%), sublingual and minor salivary glands (<10%).[1] In general malignant lymphoma originating the submandibular gland is histologically non-Hodgkin's lymphoma, frequently belonging to the B - Cell type.[2,3] Malignant lymphomas seen with AIDS are typically high grade, very aggressive and respond poorly to therapy.[4] Diagnosis is based on conventional histology and immunohistology. Neoplasms of salivary gland affect about 1 to 2 per 100,000. They are just 1% of all head and neck tumors and are most common in the sixth decade of life.[1,4,9-11]

Salivary gland tumors are a morphologically and clinically diverse group of neoplasms, which may present significant diagnostic and management challenges. In an AFIP review of case files, non-Hodgkin's lymphoma accounted for 16.3% of all malignant tumors that occurred in the major salivary glands; disease in the parotid gland accounted for about 80% of all cases.[3] Lymphoma originating in the submandibular gland is rare and occurs in 1-5% of tumors where parotid gland is the original site of tumour.[1,8-11] About 80-85% of submandibular gland tumors are benign and 15-20% is malignant.[12-15] 90% of salivary gland lymphomas present as firm painless swelling and more than 90% occurs in parotid gland.[3] In general, malignant lymphoma originating the submandibular gland is histologically non-Hodgkin's lymphoma, frequently belonging to the B - Cell type.[4,5,16-18] Malignant lymphomas seen with AIDS are typically of a high grade and extranodal, often in the brain. They are very aggressive and respond poorly to therapy.[6,7] Diagnosis is based on conventional histology and immunohistology.[8] The entire histologic spectrum of malignant lymphomas found at other sites can be seen in the salivary gland. They must be differentiated from the benign lymphoepithelial lesion, although there may be an association between the two.[1]

CONCLUSION

Present case, when viewed collectively with those in the literature, indicates that Lymphomas developing primarily in salivary glands are uncommon, and the parotid gland is their usual location. Inspite of malignant lymphoma being the second most common AIDS-associated neoplasm, it's occurrence in submandibular gland is extremely rare wherein they are exclusively high-grade, large cell type. The recognition and differential diagnosis of the lymphadenopathies and lymphomas associated with salivary glands have the practical importance of avoiding their misdiagnosis and surgical removal as tumors of salivary glands.

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REFERENCES

1. Ellis GL, Auclair PL. Tumors of the salivary glands. atlas of tumor pathology, 3rd series, fascicle 17. Washington DC: Armed Forces Institute of Pathology. 1996.
2. Hjorth L, Dommerby H, Kruse S, Nielsen A. Primary malignant lymphoma of the salivary glands. Tumori. 1986;72(5):491-7.
3. Akinola O, Fashakin O, Odesanmi WO. Primary malignant lymphoma of the submandibular salivary gland in a Nigerian. Case report and review of literature. Trop Geogr Med. 1989;41(3):280-1.
4. Ioachim HL, Antonescu C, Giancotti F, Dorsett B. EBV-associated primary lymphomas in salivary glands of HIV-infected patients. Pathol Res Pract. 1998;194(2):87-95.
5. Nagata M, Kumazawa H, Iwai H. Study of malignant lymphoma in the submandibular gland region, Nippon Jibiinkouka Gakkai Kaiho. 1996;99:918-25.
6. Batsakis JG. Tumour of the head and neck, 2nd edn. Baltimore: Williams and Wilkins. 1979:2-75.
7. Langdon JD. Baily and Love's short practice of surgery 23rd edition, Salivary Gland disorders. Chapter 42. 2000:660.
8. Hashida I, Tamaki Y, Sakurai H. Malignant lymphoma of the submandibular gland: a study of six cases. Gann no Rynsho. 1995;41:863-7.
9. Hyman Ga, Wolff M. Malignant lymphoma of the salivary glands. Am J Clin Pathol. 1976;65:421-38.
10. Beral V, Peterman T, Berkelman R, Jaffe H.AIDS-associated non-Hodgkin lymphoma. Lancet. 1991;338(8771):884-5.
11. Ioachim HL, Antonescu C, Giancotti F, Dorsett B. EBV-associated primary lymphomas in salivary glands of HIV-infected patients. Pathol Res Pract. 1998;194(2):87-95.
12. Ioachim, Harry L. MD Lymphoid Hyperplasias and Lymphomas of Salivary Glands: Pathology Case Reviews. 2004;9(5):206-213.
13. Akinola O, Fashakin O, Odesanmi WO. Primary malignant lymphoma of the submandibular salivary gland in a Nigerian. Case report and review of literature. Trop Geogr Med. 1989;41(3):280-1.
14. Po Dunn, Tseng-tong Kuo, Lee-Yung Shih. Primary Salivary Gland Lymphoma: A Clinicopathologic Study of 23 Cases in Taiwan Acta Haematologica. 2004;112:203-8.
15. Hjorth L, Dommerby H, Kruse S, Nielsen A. Primary malignant lymphoma of the salivary glands. Tumori. 1986;72(5):491-7.
16. Colby TV, Dorfman RF. Malignant lymphomas involving the salivary glands. Pathol Annu. 1979;14Pt 2:307-24.
17. Schmid U, Helbron D, Lennert K. Primary malignant lymphomas localized in salivary glands. Histopathology. 1982;6(6):673-87.
18. Johns ME, Goldsmith MM; Incidence, diagnosis, and classification of salivary gland tumors. Part 1. Oncology (Huntingt) 1989;3(2):47-56.

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