Case Report

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Pathology Section

Diffuse Large B-Cell Lymphoma Arising De Novo in Unilateral Tonsil

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ABSTRACT

Diffuse Large B Cell Lymphomas, account for a considerable fraction of lymphoid malignancies. But, the primary origin of this neoplasm in the head and neck region is comparatively less frequent. De novo origin of this neoplasm in a unilateral tonsil together with its notoriety for heterogeneous morphologic appearance and biological behaviour make it an interesting entity. Keeping this in view, we report a case of Diffuse Large Cell Lymphoma arising de novo in a unilateral tonsil in a 38 year old male.

Keywords: Malignant Lymphoma, Primary Tonsillar Diffuse Large B Cell Lymphoma, Non- Hodgkin Lymphoma

CASE SUMMARY

A 38 year old male patient presented to the department of ENT with complaints of recurrent episodes of sore throat for 2 months. On local examination, the left tonsil was more enlarged than the right tonsil. A provisional diagnosis of chronic tonsillitis was made by the physician.

General and systemic examinations revealed no abnormalities. All laboratory and ancillary investigations including complete hemogram with peripheral smear examination, ultrasound of abdomen and chest X-ray were within normal limits.

Bilateral tonsillectomy was undertaken and the specimen was submitted for histopathological examination with a request to rule out malignancy in view of the greater enlargement of the left tonsil.

HISTOPATHOLOGICAL FINDINGS

Gross examination findings-Bilateral tonsillectomy specimen was received. Left tonsil measured 2.3x2x2cm and the right tonsil measured 2x1x1cm. Cut section of the left tonsil was grey- white and homogenous while, the right tonsil was grey-white.

Microscopic findings-Section studied from the left tonsil showed normal stratified squamous epithelial lining [Table/Fig-1]. The subepithelial connective tissue showed complete effacement of architecture and diffuse replacement by monotonous population of uniform, lymphoid tumor cells [Table/Fig-2].

The tumor cells were large with scanty cytoplasm. The nuclei showed vesicular chromatin, irregular nuclear membranes and single prominent nucleolus [Table/Fig-3].

Section from the right tonsil showed features of chronic tonsillitis.

Histopathological diagnosis –Unilateral Tonsillar Non-Hodgkin Lymphoma –Diffuse Large B-Cell Lymphoma.

IHC positivity for CD-20 confirmed the diagnosis. A thorough clinical evaluation including bone marrow examination ruled out any other nodal or extra- nodal involvement.

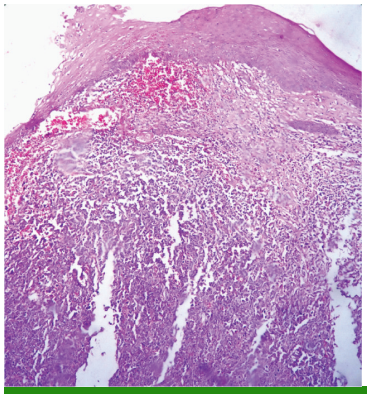
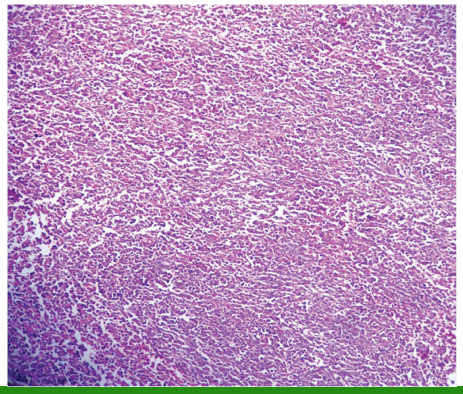
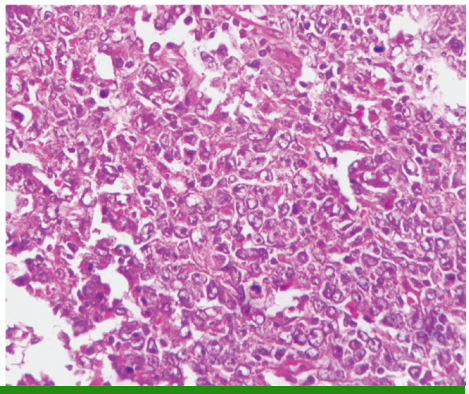
Final diagnosis- Primary Unilateral Tonsillar Diffuse Large B-Cell Lymphoma.

DISCUSSION

Malignant Lymphoma primarily involves the lymph nodes. On the contrary, 24% to 48% of Non-Hodgkin Lymphomas (NHL) may arise from extra-nodal sites [1]. About 10% of extra- nodal lymphomas are seen in the head and neck region [2] Majority of the head and neck lymphomas occur in the Waldeyer ring [3]. 40% to 50% of these arise in the tonsil [4,5]. Tonsillar lymphomas occur mostly in elderly males and present with sore throat,tonsillar enlargement,cervical lymphadenopathy or dysphagia . Majority of the tonsillar lymphomas are of B-Cell origin with the most common histological type being diffuse large B-Cell lymphoma (DLBCL) [6,7]. DLBCL accounts for about 30% of all lymphoid malignancies [8,9].

Diffuse B-cell lymphoma represents a diverse spectrum of disease in its morphologic features, immunophenotype and biologic behaviour including response to chemotherapy and final outcome.Conventional classification does not help in predicting the outcome of the entity [9].

Although DLBCL is potentially curable, a variable response is

[Table/Fig-1]: Normal stratified squamous epithelial lining. Sub- epithelial effacement of architecture, replacement by lymphoid tumor cells (H & E, ×100).
[Table/Fig-2]: Diffuse, monotonous population of tumor cells, (H & E, ×100)
[Table/Fig-3]: Large tumor cells with scant cytoplasm, vesicular nuclei with irregular nuclear membrane and prominent nucleoli, (H & E, ×400)

often observed [9].

In the course of extensive research to study the biology of DLBCL in order to investigate the inherent heterogenicity of this entity, many prognostic factors were discovered along with a better understanding of the various origins of DLBCL [9].

It is now understood that DLBCL may arise due to a transformation from an underlying low-grade lympho proliferative disorder [9]. Considering these intriguing facts about DLBCL, we report a case of DLBCL arising denovo in a 38 year old male in unilateral tonsil along with a brief review of literature.

Diffuse Large B-Cell Lymphoma (DLBCL) which is the most common type of Non-Hodgkin Lymphoma, possesses morphological and prognostic features representing a diverse spectrum of disease. It is difficult to predict the outcome of this disease by conventional morphological classification. By adopting gene expression profiling studies, DLBCL may be classified as germinal centre B-Cell and activated B-Cell types amongst which germinal centre type is known to have a better survival rate [9].

Tonsillar lymphomas mostly occur in elderly males with the median age at second decade [9]. Our patient was younger.

The common presenting symptoms include tonsillar enlargement, cervical lymphadenopathy, dysphagia or sore throat. Our patient presented with tonsillar enlargement and sore throat.

Various treatment procedures have been adopted including only chemotherapy, only radiotherapy or combination of both.

Our patient was referred to a higher centre for management and lost to follow-up.

CONCLUSION

De novo origin of Diffuse Large B- cell Lymphoma in the tonsil is a relatively unusual situation that is seldom encountered in routine practice. It can easily be mistaken for tonsillitis especially when the only presenting manifestation is tonsillar enlargement. Incidental detection of the neoplasm on histopathological examination as in the present case throws light on the fact that, the possibility of a tonsillar neoplasm needs to be considered whenever one of the tonsils shows greater enlargement than the other.

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