Diffuse large B-cell lymphoma of the nasopharynx

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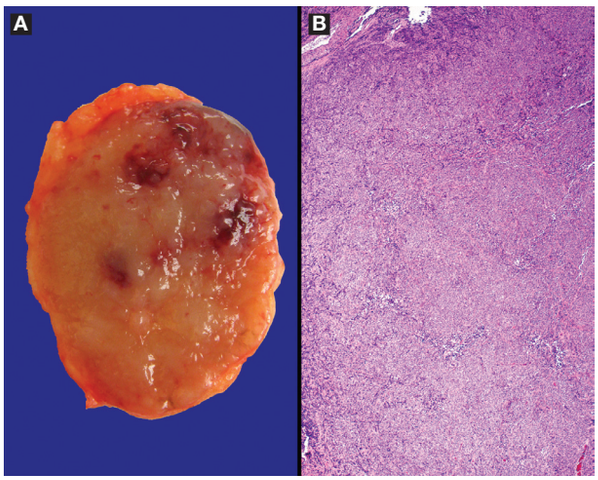

Figure 1. ***A:*** *Photograph shows a gross illustration of the "fish flesh" appearance of a cut lymphoid tumor.* ***B:*** *A vague nodularity is seen in this otherwise effaced nasopharyngeal tissue.*

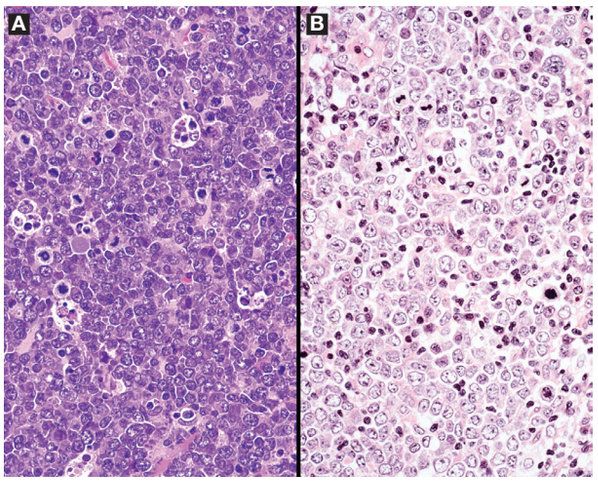

Figure 2. ***A:*** *The neoplastic cells show a sheet-like distribution. Numerous tingible-body macrophages are present along with numerous mitoses, indicating a high proliferation index.* ***B:*** *Note the open, vesicular nuclear chromatin within the nuclei, which have irregular contours.*

Diffuse large B-cell lymphoma (DLBCL) is a primary malignant B-cell lymphoid neoplasm. The bulk of the disease develops in the Waldeyer ring (palatine tonsils, nasopharyngeal adenoids, base of the tongue, and lingual tonsils). DLBCL accounts for more than 50% of all Waldeyer ring lymphomas, which in turn account for about 15% of all head and neck lymphomas and about 50% of all extranodal head and neck lymphomas. The incidence of DLBCL is higher in Asian patients than in Western patients. Men are affected more often than women, and most patients present between the sixth and eighth decades of life. Patients with an underlying immunodeficiency disorder tend to present at a younger age.

In general, the tonsils are more commonly affected than the nasopharynx or tongue base. Patients present with dysphagia, odynophagia, swelling or a lump in the throat, decreased hearing, pain, and sore throat. The vast majority of cases are unilateral, and concurrent cervical adenopathy is present in about two-thirds of patients. B symptoms (fever, chills, weight loss, and night sweats) have been reported infrequently.

Surgery may be performed for symptomatic relief, but the mainstay of therapy is radiation and/or chemotherapy. Most patients present with low-stage disease, and 5-year survival is approximately 65%. Relapses are common, and they frequently affect the regional lymph nodes, although other mucosal sites (e.g., gastrointestinal tract, lung), bone marrow, and liver may also be affected.

Histologically, DLBCLs exhibit a diffuse effacement of the normal architecture by a submucosal, discohe-

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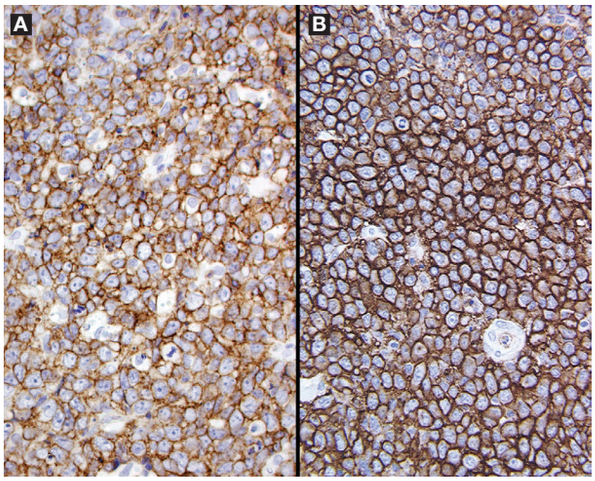

*Figure 3. A: The neoplastic cells show a strong and diffuse cytoplasmic reaction with CD45RB (**A**) and CD20 (**B**), which helps confirm the B-cell phenotype of this lymphoma.*

sive cellular infiltrate (figure 1). Germinal centers are usually lost, although germinal center colonization is sometimes seen. The neoplastic cells are large, with round to oval nuclei showing open, vesicular nuclear chromatin and prominent nucleoli (figure 2). Nuclear contour irregularities are frequently present. There are usually many mitoses, including atypical forms. Necrosis and apoptosis are common.

DLBCLs usually demonstrate a positive reaction with pan B-cell markers, particularly for follicular center cell-derived cells, and they are nonreactive with T-cell markers. The tumor cells are usually reactive with CD45RB, CD20 (figure 3), CD79a, bcl-6, CD10, vimentin, and p63. The proliferation index (Ki-67) is usually greater than 90%. The cells are negative with CD3, CD5, CD56, and EBER. Reactive lymphoid follicular hyperplasia, infectious mononucleosis, and nasopharyngeal carcinoma (nonkeratinizing type) need to be excluded histologically and/or immunophenotypically.

Suggested reading

Krol AD, Le Cessie S, Snijder S, et al. Waldeyer's ring lymphomas: A clinical study from the Comprehensive Cancer Center West population based NHL registry. Leuk Lymphoma 2001;42(5):1005-13.

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Mohammadianpanah M, Omidvai S, Mosalei A, Ahmadloo N. Treatment results of tonsillar lymphoma: A 10-year experience. Ann Hematol 2005;84(4):223-6.

Saul SH, Kapadia SB. Primary lymphoma of Waldeyer's ring. Clinicopathologic study of 68 cases. Cancer 1985;56(1):157-66.

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normal, and there is no evidence that the incidence of thyroid pathology is any greater in these patients than it is in the general population.[5] However, a remnant of the normally developed lobe can be somewhat hypertrophic on clinical examination and act as a pseudomass. When pathologies affecting the remaining thyroid lobe do occur in these patients, the most common are hyperthyroidism, hypothyroidism, and goiter. The low rate of thyroid carcinoma in cases of hemiagenesis does not appear to justify prophylactic thyroidectomy.[1]

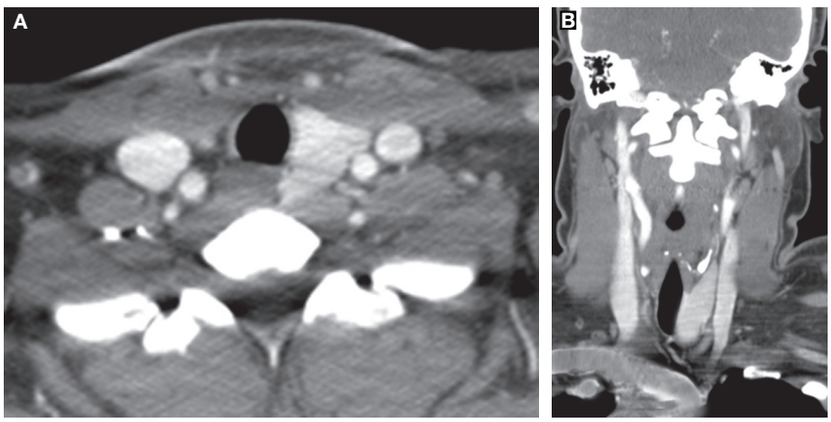

*Figure 2. Axial (**A**) and coronal (**B**) CTs of the 25-year-old woman demonstrate the hemiagenesis of the right lobe and some compensatory hypertrophy on the left.*

References

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4. Cakir M, Gonen S, Dikbas O, Ozturk B. Thyroid hemiagenesis with Graves' disease, Graves' ophthalmopathy and multinodular goiter. Intern Med 2009:48(12):1047-9.
5. Peña S, Loehn B, Robertson H, Walvekar RR. Thyroid hemiagenesis: Report of a case and review of the literature. Laryngoscope 2010;120(Suppl 4):S174.