Letter to Editor

Primary nasopharyngeal non-Hodgkin lymphoma

Sir,

A 12-year-old boy presented with the complaints of the nasal block for 2 months and progressive difficulty in swallowing. On magnetic resonance imaging, a large homogeneous nasopharyngeal mass is seen extending into the oropharynx showing no evidence of bony erosions, no necrosis, and no vascular invasion [Figure 1a and b]. A provisional diagnosis of lymphoma was considered. Differential diagnoses considered were nasopharyngeal carcinoma, rhabdomyosarcoma, and juvenile angiofibroma. Nasopharyngeal biopsy revealed sheets of atypical lymphoid cells infiltrating the fibrous and vascularized connective tissue stroma. The cells exhibited nuclear atypia and scanty neoplasm. The cells were strongly positive for leukocyte common antigen, CD20cy, and CD99a. A histopathological diagnosis of malignant non-Hodgkin lymphoma – B type was made [Figure 2].

Lymphomas are the second most common head-and-neck malignancy after squamous cell carcinoma.[1] More than 90% of the head-and-neck cancers are squamous cell carcinomas.[2] The most common site of extranodal involvement by non-Hodgkin's lymphomas is the Waldeyer's ring.[3] Other sites include the tonsils, para-oral regions, and gastrointestinal tract.[4] On imaging, lymphomas are seen as homogeneously enhancing, infiltrating multicompartmental masses with no necrosis. Bony erosions follow the permeative pattern of destruction. Lymphomas show no arterial narrowing or venous luminal invasion. NHL is a homogeneous tumor that tends to diffusely involve all walls of the nasopharynx and spread in an exophytic fashion to fill the airway, rather than infiltrating into the deep tissues. Primary NHL more commonly spreads superficially to involve the nasal cavity or oropharynx. Lymphadenopathy is frequent and extensive. Rhabdomyosarcoma is the most common nasopharyngeal lesion in the pediatric population and is usually seen in younger patients as compared with nasopharyngeal lymphoma and is an aggressive and infiltrative lesion. Nasopharyngeal carcinoma is the most common primary malignant tumor of the head and neck, common in the age group 40–60 and centered at the fossa of Rosenmüller. Juvenile angiofibroma is a benign, locally invasive, hypervascular lesion almost exclusively seen in male teenagers and expands the pterygopalatine fossa. Treatment for lymphoma stages I and II are a combination of chemotherapy and radiotherapy, and for stages III and IV is chemotherapy. A large tumor that fills the nasopharynx, with no or minimal invasion into deep structures, and a propensity to extend down into the tonsil, rather than up into the skull base, may suggest the diagnosis of NHL over nasopharyngeal carcinoma. On imaging, NHL should be considered as against nasopharyngeal carcinoma if there is a symmetric nasopharyngeal mass with marked homogeneity, a high degree of enhancement, and a higher Waldeyer ring involvement combined with no invasion into the deep structures.

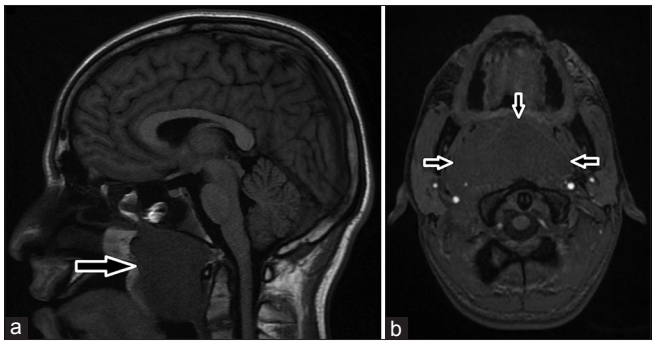

Figure 1: (a) Sagittal T1-weighted magnetic resonance image demonstrating a large homogeneous mass lesion (arrow) involving the nasopharynx and extending into the oropharynx in a biopsy-proven case of non-Hodgkin lymphoma, (b) Axial three-dimensional-time-of-flight magnetic resonance-angiography image demonstrating a large nasopharyngeal mass (arrows) and its homogeneous appearance. Symmetrical lymphoid tissue normally exists in the nasopharynx, as Waldeyer's ring, in which a primary lymphoma develops as demonstrated in the image

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and

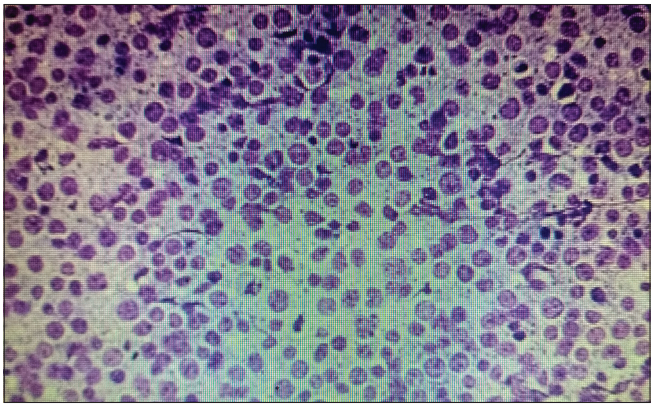

Figure 2: High power view demonstrating sheets of atypical lymphoid cells infiltrating connective tissue stroma with enlarged nuclei and scanty cytoplasm (May-Grunwald Giesma, ×400)

other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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