Extranodal Lymphoma of the Head and Neck

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EDUCATIONAL OBJECTIVES
1. Illustrate the characteristic imaging features of extranodal lymphoma of the head and neck (ENL-HN) with a variety of case examples based on the anatomic pattern.
2. Review the pathologic features of ENL-HN.
3. Review diagnostic approaches.

INTRODUCTION
Lymphoma is the 2nd most common neoplasm of the head and neck, and up to 30% of the time it can present as an extranodal mass. Extranodal lymphomas of the head and neck (ENL-HN) may be seen in isolation or in conjunction with nodal disease. Disease sites include: A lymphoma confined within Waldeyer’s ring or extralymphatic regions including the sinonasal cavity, salivary glands (SGs), orbit/ocular adnexa and the thyroid gland. ENL-HN may mimic other disease processes including other cancers, granulomatous disease and infection.

The clinical presentation of ENL-HN is variable with some tumors exhibiting an indolent course and others with more aggressive features. Risk factors include EBV, autoimmune disease, HIV and as a complication of immunosuppressive therapy. Staging is based on the Ann Arbor system.

Imaging evaluation of ENL-HN is performed with a combination of CT, MRI and FDG-PET. In general, ENL-HN presents as a bulky homogenous submucosal mass. Ulceration is atypical. Aggressive forms may cause bony destruction with soft tissue encasement. MRI shows low T1, relatively low T2, restricted diffusion (related to the tumor cellularity) with enhancement. Avid FDG uptake is typically seen on PET imaging.

PATHOLOGY
Non-Hodgkin lymphoma (NHL) frequently presents with extranodal disease, occurring in up to 30% of patients. Hodgkin lymphoma (HL) however rarely presents with extranodal disease. The most common type of NHL seen in the head and neck is large B cell lymphoma which often involves Waldeyer’s ring, the parapharyngeal sinuses and the mandible. Marginal zone (MALT type) lymphoma has a predilection for the orbit, salivary glands, thyroid and larynx whereas NKT cell lymphoma is seen most often within the paranasal sinuses.

SUMMARY
Lymphoma should be considered in the differential diagnosis in a patient presenting with an extranodal soft tissue mass within the head and neck, especially in patients with predisposing risk factors. A comprehensive understanding of the varied imaging appearances of ENL-HN will enable the radiologist to accurately diagnose, stage and evaluate treatment response to this disease.

REFERENCES

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