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A RARE CASE OF SINONASAL LYMPHOMA

Radiology

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ABSTRACT

A 42-year-old male presented with an 8-year history of swelling in the right supraorbital area. Initial clinical evaluation raised concerns about possible arterio-venous malformation or sinonasal mass, prompting a Contrast-Enhanced Computed Tomography (CECT) scan of the orbits. Although rare, sinonasal lymphomas should be considered in cases of chronic, localized swelling in the orbital or paranasal regions, particularly when symptoms persist despite standard treatments. Sinonasal lymphoma, often seen as extranodal NK/T- cell or diffuse large B-cell lymphoma, may appear on imaging as a soft tissue mass with heterogeneous enhancement, sometimes accompanied by bone erosion or invasion of nearby structures. Radiological features on CECT, such as the mass's enhancement pattern, help distinguish lymphoma from other sinonasal tumors or vascular abnormalities. Ultimately, a combination of imaging, biopsy, and histopathology is essential for accurate diagnosis and guiding treatment options.

KEYWORDS

extranodal lymphoma, sinonasal tumor, orbital swelling, sinonasal mass, sinonasal lymphoma

INTRODUCTION

Sinonasal lymphoma refers to the involvement of the nasal cavity and /or paranasal sinuses. It can be primary or secondary. Sinonasal lymphomas may be either seen as diffusely infiltrating lesions extending along the walls of paranasal sinuses and nasal cavity or as discreate sinonasal soft tissue mass like lesions. Sinonasal lymphoma, although a rare entity, comprises a notable portion of all sinonasal malignancies [1].

Case Presentation

A 42-year male was referred from the ophthalmology department with gradual swelling over right supraorbital region for 8 years associated with sinus pain. CECT orbits with contrast was done to rule out arterio-venous malformation/sinonasal malignancy.

Radiological Findings Include:-

- Well defined expansile solid soft tissue mass lesion with epicenter involving right frontoethmoidal and roof of the orbit.
- Anteriorly the lesion is seen involving frontal sinus with erosion of outer and inner table showing extracranial extension.
- Posteriorly, the lesion is seen extending upto the apex of the orbit causing expansion of the retro-coanalregion.
- Inferior displacement of floor of orbit towards the right maxillary sinus.
- Medially, it is seen eroding the anterior and posterior ethmoidal wall.
- The lesion is seen involving the posteromedial aspect of orbit causing anteroinferior displacement of eyeball with proptosis.
- The lesion is seen abutting the medial rectus and optic nerve.
- On postcontrast sequence, there is subtle patchy enhancement.
- Bilateral basifrontal regions of the brain show ill-defined areas of hypodensities.
- Paradoxical right middle turbinate noted.

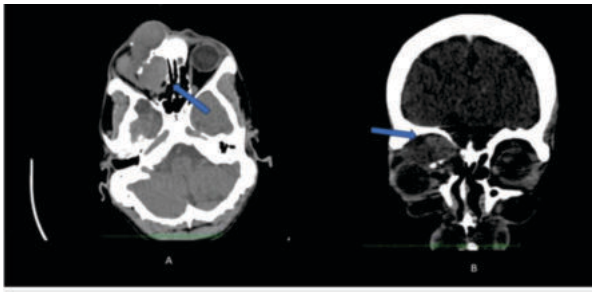

FIGURE 1: Well defined expansile solid soft tissue mass lesion with epicenter involving right frontoethmoidal (A) and roof of the orbit (B).

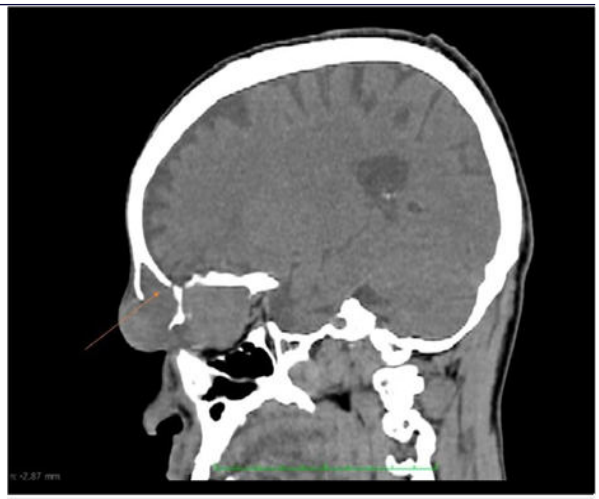

FIGURE 2: Anteriorly the lesion is seen involving right frontal sinus (Orange arrow).

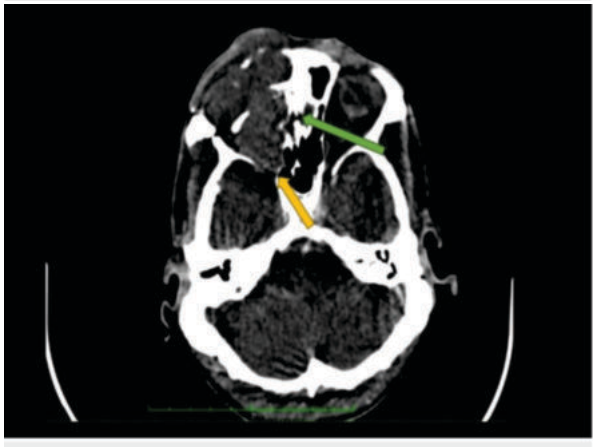

FIGURE 3: Posteriorly, the lesion is seen extending upto the apex of the right orbit causing expansion of the retro-coanal region (yellow arrow). Medially, it is seen eroding the anterior and posterior ethmoidal walls (green arrow).

FIGURE 4: Inferolateral displacement of right orbit is seen (blue arrow).

DISCUSSION

On imaging studies, sinonasal lymphomas may be seen as diffusely infiltrating lesions along walls of paranasal sinuses and nasal cavity or as discrete sinonasal soft tissue masses. On CT lesions appears of soft tissues density (usually is iso-dense to muscles). Associated bone destruction is better appreciated on CT. The combination of imaging findings on CECT and histopathological confirmation underscores the importance of considering lymphoma in cases of chronic orbital or paranasal swelling with bone involvement. Early diagnosis through radiological and pathological correlation is essential for optimal management of such rare presentations.

CONCLUSIONS

This case of sinonasal lymphoma is notable for its rarity, particularly due to the presence of bone erosion, which is an uncommon finding in sinonasal lymphomas. The combination of imaging findings on CECT and histopathological confirmation underscores the importance of considering lymphoma in cases of chronic orbital or paranasal swelling with bone involvement. In this case, the radiological findings, when correlated with histopathology confirmed the diagnosis of sinonasal lymphoma.

Additional Information

Disclosures

Human Subjects: All authors have confirmed that this study did not involve human participants or tissue.

Conflicts Of Interest: In compliance with the ICMJE uniform disclosure form, all authors declare the following:
Payment/Services Info: All authors have declared that no financial support was received from any organization for the submitted work.

Financial Relationships: All authors have declared that they have no financial relationships at present or within the previous three years with any organizations that might have an interest in the submitted work.

Other Relationships: All authors have declared that there are no other relationships or activities that could appear to have influenced the submitted work.

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