An Unusual Case of a Naso-Septal Mass Presenting as Orbital Cellulitis

Sruti Akula[1], Bryant Carruth, MD[1,2]
1. Department of Ophthalmology, State University of New York Upstate Medical University, Syracuse, NY
2. Eye Plastic and Reconstructive Surgeons of CNY, Syracuse, NY

Case Presentation

•Intermittent tearing from left eye over prior year and a half, patient attributed to allergies

•Presented to ED after progression to left peri-orbital erythema and tearing that became rapidly edematous

•PE: eye pain on palpation, headache, chills, and nausea, but no fever

•VA 20/20 b/l, pain with all directions of gaze OS, CV symmetric and no RAPD noted. Moderate resistance to retropulsion OS. 1-2+ edema upper and lower lid with erythema and 1+ injection noted OS. Mild to moderate subjective left proptosis.

•Presumed clinical diagnosis of left sinusitis with periorbital cellulitis

Testing

•Taken by ENT urgently to OR for presumed sinus and abscess drainage

–Soft tissue mass rather than sinusitis and abscess

•MRI demonstrated a 2.4 x 3.3 x 2.9 cm well-circumscribed mass centered around left nasal passage measuring

•Mass effect on surrounding structures with mild deviation of the left medial rectus muscle and bilateral mucosal thickening of maxillary sinuses

•Chondrosarcoma caused secondary nasolacrimal duct obstruction and acute dacryocystitis which improved with IV and then oral antibiotics

•Patient discharged with plan for combined ENT/Oculoplastic procedure to resect mass and reconstruct nasolacrimal outflow system and orbit as necessary

Second Surgery

•Inferomedial bone with some bony destruction but periorbita nicely intact and lesion peeled off of periorbita with complete preservation of orbital tissue and conjunctiva.

Post-Op Course

was performed

•No vision changes or paresthesias to face; eye white and quiet with lacrimal stent nicely seated at medial canthus

•Tumor Type: low grade chondrosarcoma

•Tumor Stage: pT1, involves sinonasal septum and invades lamellar bone. All margins negative aside from sampled L lamina (unclear if this is margin or not)

•Tumor board decided that activity low enough and margins clear enough to manage expectantly after resection with no plan for radiation unless necessary

•Now doing well 3 months post-op with no clinical recurrence, no discharge, no tearing. Exam fully normal and symmetric.

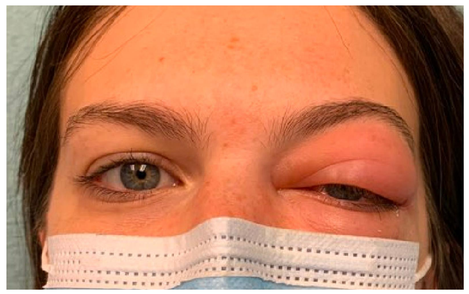

Figure 1: Presentation to ED with visible erythema and edema OS

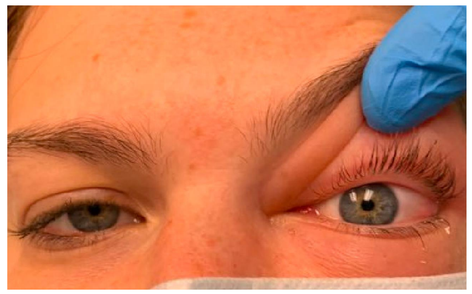

Figure 2: Presentation to ED with visible erythema, edema, injection, and mild proptosis OS

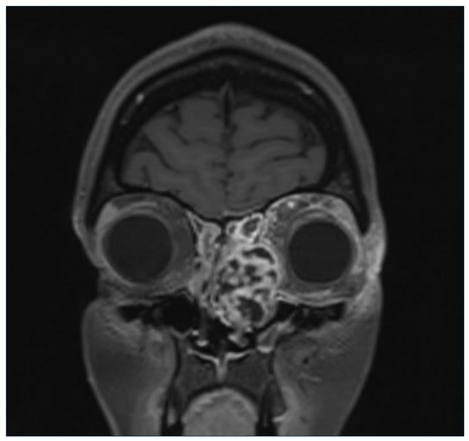

Figure 3: Coronal view CT Max-Face: ethmoid mucocele with invasion of the left and right orbits with possible subperiosteal abscess, as well as frontal, maxillary, and ethmoid sinusitis

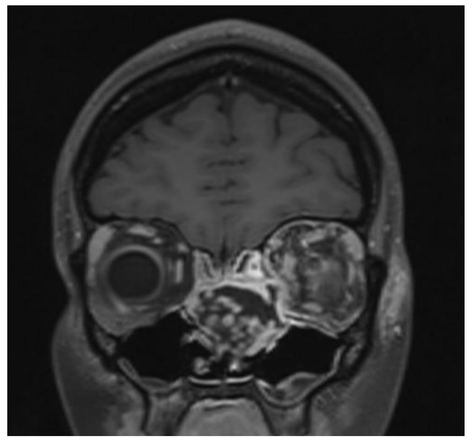

Figure 4: Coronal view CT Max-Face: ethmoid mucocele with invasion of the left and right orbits with possible subperiosteal abscess, as well as frontal, maxillary, and ethmoid sinusitis

Figure 5: Sagittal view

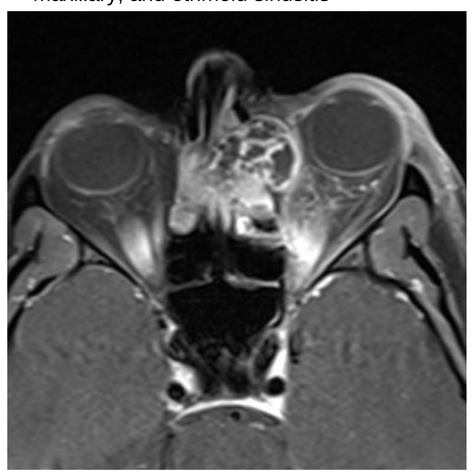

Figure 6: Transverse view

Discussion

- Tumors of the lacrimal gland encompass about 25% of orbital neoplasms
- Chondrosarcomas arise from cartilage-producing mesenchymal cells
- Appear ~ second or third decade of life, with a slight increased prevalence in females
  - Usually present in the pelvis, ribs, femur, and humerus
  - Only 34% of cases are attributed to extra-skeletal sites, naso-septal locations particularly rare
    - Less than 100 cases are reported in the literature as of 2020
  - Four subtypes exist: conventional (85%), clear cell, de-differentiated, and mesenchymal
- May present with nasal symptoms such as sinusitis, epistaxis, and lacrimation, usually bilaterally
  - Restricted extraocular movement, diplopia, and exophthalmos
- Prognosis
  - Head and neck region noted to have a lower prevalence of high-grade tumors
- Surgical resection with adjuvant chemotherapy and radiation is the treatment of choice
  - Brachytherapy can be pursued if recurrence occurs
- Highlights importance of keeping sino-nasal masses causing secondary outflow obstruction (such as chondrosarcoma) in differential when a patient presents with assumed infectious etiology and imaging is not stereotypical for sinusitis and subperiosteal abscess

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