Adenocarcinoma of the Ethmoid Sinus Presenting with Epiphora

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Case Report

A 63-year-old man first visited presented in May 2015 complaining of excessive tearing from the right eye that began four years earlier.

Examination revealed a non-tender, palpable mass in the right medial canthal (RMC) area that had not been noticed previously by the patient.

Probing and irrigation of the right lower lacrimal canaliculus revealed complete obstruction. Nasal endoscopy was performed and showed significant septal deviation to the right but no intranasal masses.

Visual acuity, ocular motility, and the anterior segment were all within normal limits.

With a preliminary diagnosis of complete right-sided nasolacrimal duct obstruction, endoscopic dacryocystorhinostomy (DCR) with placement of a nasolacrimal stent (Crawford tube) was recommended to the patient. He opted to wait until a later date to have the procedure done.

Histopathology

Figure 2A, 10x: Section from the mass of the right nasal passage and orbit showing adenocarcinoma with a cribriform pattern and surrounding bone (H&E 10x).

Figure 2B, 50x: This adenocarcinoma is comprised of cells with eosinophilic cytoplasm and moderate grade nuclear features (H&E 50x).

Imaging

Figure 3, 10x:

Figure 1: Axial computed tomography of the paranasal sinuses showing a large tumor mass in the ethmoid sinuses invading into the right medial orbit.

Case Report – Continued

The patient returned in June 2019 complaining of progressive swelling and a hard mass in the RMC area associated with worsening epiphora and haemolacria.

Examination of the area revealed a small bump beneath the skin without overlying edema or erythema. Gentle palpation caused the mass to burst with a green mucopurulent discharge.

CT scans of the head and orbits revealed a large growth in the ethmoid sinus invading into the right medial orbit and extending into the maxilla. (Fig. 1)

Endoscopic endonasal biopsy of the mass was performed and a 1.4 x 1.2 x 0.2 cm section of the tumor mass was excised from the right ethmoid sinus.

Upon histopathological analysis, the tumor tissue demonstrated a cribriform pattern, moderately graded nuclei with occasional necrosis, and eosinophilic features [Fig. 2, 3].

Immunohistochemistry was performed, and the tumor cells stained positively for markers including androgen, GATA3, HER2/Neu. The tumor cells stained negative for CKD-2.

The tumor’s location, morphology, and immunostaining patterns confirmed the diagnosis of low to intermediate grade non-intestinal type sinonasal adenocarcinoma of the ethmoid sinus.

Several treatment options were discussed with the patient including surgical resection, chemotherapy, and radiation. Ultimately, the patient opted to undergo orbital exenteration and large sinus resection.

References