

Introduction

Sinonasal renal cell-like adenocarcinoma is a very rare neoplasm with the literature consisting of case reports and small case series¹⁻³. It is considered a subtype of non-intestinal-type sinonasal adenocarcinoma. Here, we present the case of a 68-year-old male with sinonasal renal cell-like adenocarcinoma.

Case Report

The patient is a 68-year-old male with a history remarkable for peripheral T-cell lymphoma diagnosed 20 years prior status post chemotherapy and bone marrow transplant and subsequent diagnosis of myelodysplastic syndrome. He was incidentally found to have a left sinonasal lesion on CT imaging. On preoperative exam the patient was noted to be neurologically intact. He subsequently underwent bifrontal craniotomy and endoscopic assisted craniofacial resection of the tumor with autologous fascia lata reconstruction. The patient had an uneventful post operative course and remained at his neurologic baseline without signs of CSF leak.

Imaging

MRI and CT (Figures 1 and 2) demonstrated a 2.5 x 1.3 x 2.4 cm enhancing lesion within the superior aspect of the left nasal cavity and the left anterior ethmoid sinus, eroding the cribriform plate. PET demonstrated mild FDG uptake in the left nasal mass. Post-operative MRI at 6 months (Figure 3) demonstrated expected post-operative changes without evidence of recurrence.

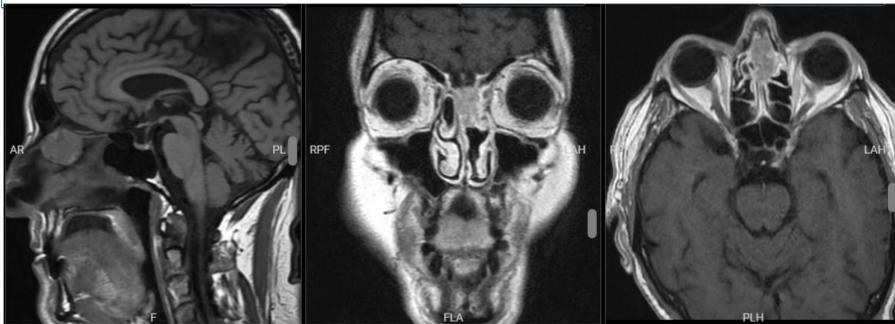


Figure 1: Preoperative MRI

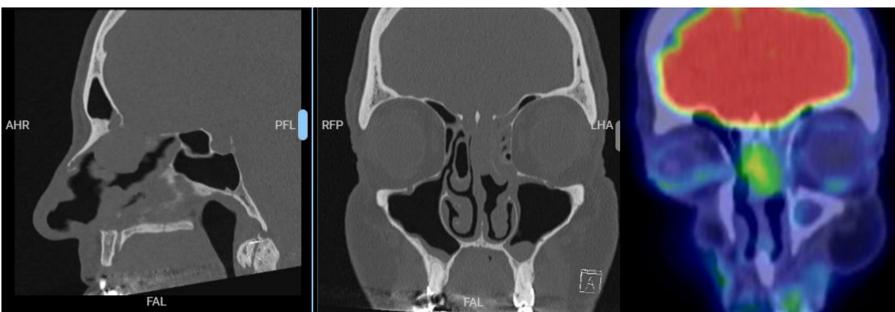


Figure 2: Preoperative CT and PET

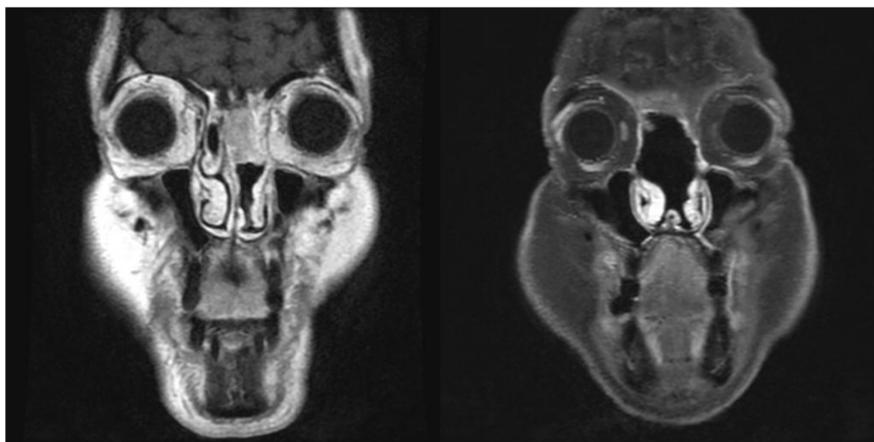
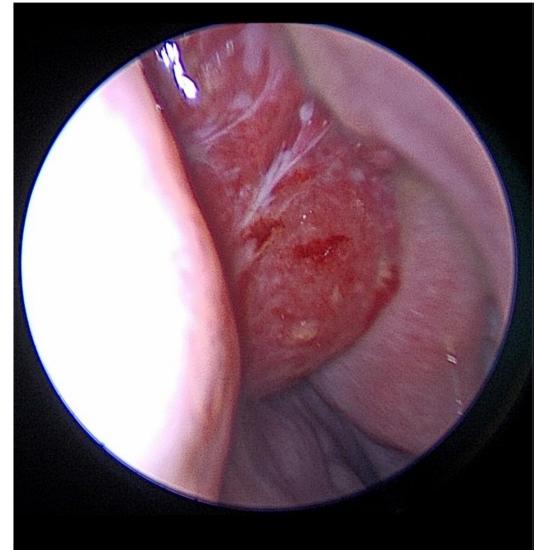


Figure 3: Postoperative MRI

Nasal Endoscopy

Rigid nasal endoscopy (Figure 4) confirmed a left olfactory cleft mass which was biopsied in the operating room due to its vascular appearance. The mass was noted to be involving the middle turbinate and skull base.



Operative Technique

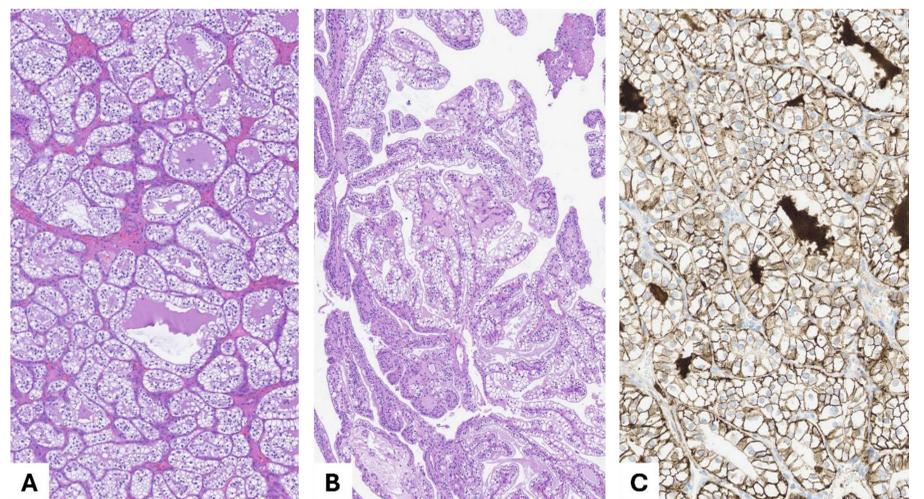
The patient underwent a bifrontal craniotomy and endoscopic assisted craniofacial resection of the anterior skull base lesion.

Key steps of the operation:

- Coronal incision with harvest of vascularized pericranial graft
- Standard bifrontal craniotomy⁴
- Resection of the cribriform dura and proximal falx to negative margins
- Resection of the bony anterior skull base including cribriform plate
- Endoscopic assisted craniofacial resection of tumor
- Water-tight dural closure with autologous fascia lata graft
- Reconstruction with fascia lata onlay and vascularized pericranial graft
- Endonasal nasoseptal flap

Histology

The neoplasm was remarkable for glandular proliferations composed entirely of cells with clear cytoplasm (Figure 5A). Papillary growth was scattered throughout the neoplasm (Figure 5B). The tubules were involved by a rich fibrovascular network, however hemorrhage was not a prominent feature. The neoplastic cells gave positive reactions with antibodies directed against carbonic anhydrase IX (Figure 5C), keratin 7, and SOX10. Negative reactions were observed with antibodies directed against PAX8 and S100 protein. Left cribriform dura was involved by carcinoma; all margins obtained were negative.



Discussion and Conclusions

Treatment of sinonasal renal cell like adenocarcinoma based on prior published cases typically involves surgical excision with or without adjuvant radiation therapy, with low recurrence rates reported¹⁻³. Given that we were able to obtain a gross total resection with negative margins, for this patient we plan to withhold adjuvant therapy and follow the patient with serial MRI scans at 6-month intervals for the next 5 years. Our case adds to the small but growing literature on this very rare diagnosis.

Contact

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