Responsiveness of Glomangiopericytoma to Induction Chemotherapy

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Introduction

Glomangiopericytoma **(GPC)** is a rare malignant tumor arising from pericytes in the nasal cavity or paranasal sinuses that makes up for less than 0.5% of all sinonasal neoplasms. Standard treatment is margin negative surgical excision without the use of chemotherapy or radiation. The risk of local recurrence without adequate excision is approximately 20%. We present a case of use of induction chemotherapy to treat concurrent oropharyngeal SCCa followed by staged resection of simultaneous GPC.

Case Report

The patient is a 57-year-old male who presented for evaluation of a right base of tongue mass identified on Computed Tomography (CT) of the neck. Direct laryngoscopy with biopsy confirmed P-16 negative squamous cell carcinoma (SCC). Positron Emission Tomography (PET) was ordered for initial staging. This demonstrated avidity within the posterior right nasal cavity. Biopsy was performed of nasal mass demonstrating GPC of the posterior right septum and olfactory cleft. Treatment was initiated for the primary SCC, with surveillance of the GPC. The patient underwent concurrent chemoradiotherapy (CCRT) with Cisplatin and XRT to primary OP malignancy and bilateral necks with planned staged resection of GPC. Repeat imaging post-treatment (figure 2) demonstrated significant size reduction in the known GPC demonstrating a favorable response to chemotherapy. Subsequently, the patient underwent staged right endoscopic craniofacial resection of the GPC with negative margins. At 12 months out from treatment patient remains disease free from both oropharyngeal and sinonasal malignancy.

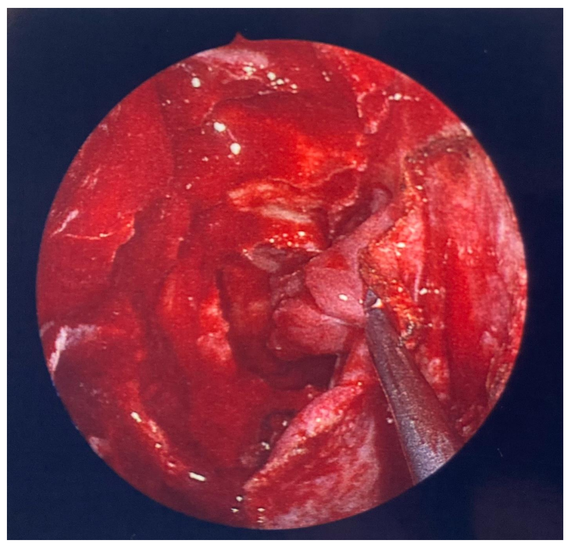

Figure 4. Intraoperative endoscopic view of Glomangiopericytoma

Discussion

Complete surgical excision remains the standard treatment for GPC. Little evidence exists on the role of chemotherapy on GPC. This case highlights the potential role of chemotherapy in cases where tumors are deemed unresectable due to invasion of critical anatomical structures, which would otherwise result in significant comorbidities. Chemotherapy may reduce tumor burden, making surgical excision more feasible and can serve as a viable option in the treatment paradigm of these rare malignancies. More so, in cases where the patient has a second primary cancer, as seen in this case, GPC's partial response to chemotherapy suggests that GPC can be safely monitored during treatment without compromising overall care.

Conclusions

- GPC demonstrates a favorable response to systemic chemotherapy
- Complete surgical excision remains the standard treatment for GPC, induction chemotherapy may be a viable therapy in cases where tumors are deemed unresectable
- In cases where a patient has a second primary cancer, as seen in this case, GPC's partial response to chemotherapy suggests that GPC can be safely monitored during treatment without compromising overall care.

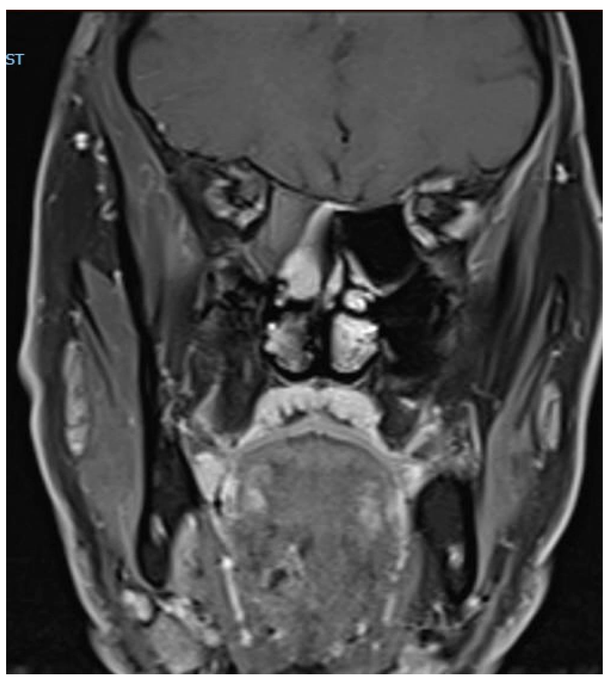

Figure 1. MRI pre-CCRT

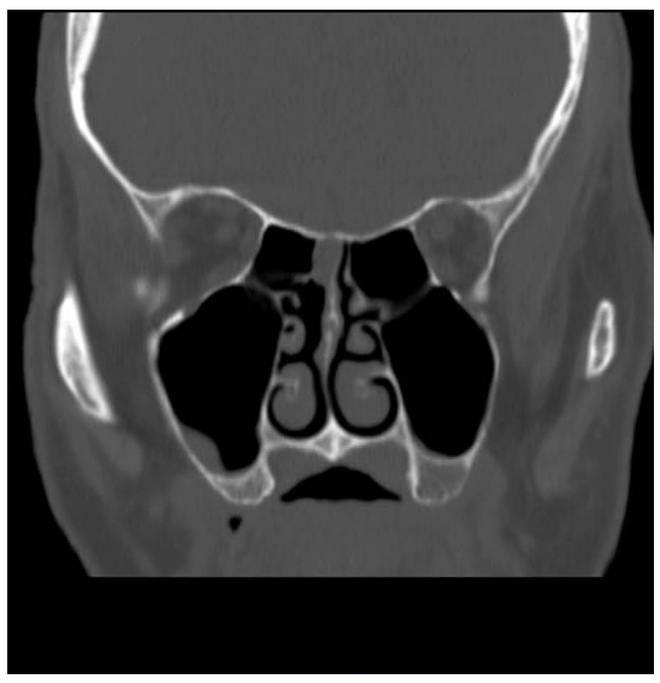

Figure 2 CT post CCRT ; pre surgical excision

Figure 3. MRI post surgical excsion.

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