

Multiple paranasal sinus involvement from a metastatic follicular carcinoma thyroid

Sir,

A great majority of tumors affecting the paranasal sinuses (PNS) are primary carcinomas; metastasis to the PNS is extremely rare.^[1-4] Among the various PNS, the maxillary sinus is reported to be the most commonly affected by metastatic tumors, followed by the sphenoid, ethmoid, and frontal sinuses.^[1-2] Metastasis to the PNS can occur from a primary tumor anywhere in the body; metastases from primaries of the kidney, lung, prostate, and breast have been described to be more frequent. There have been only isolated case reports of PNS metastasis from thyroid cancers.^[3-4] We present a rare case of metastasis from a follicular carcinoma thyroid with multiple paranasal sinus involvement.

A 55-year-old woman underwent a total thyroidectomy and a right functional neck dissection for a follicular carcinoma thyroid. She was on follow-up with suppressive doses of thyroxin after remnant radioiodine ablation. Two years later, she presented to us with a right-sided facial swelling, nasal obstruction with occasional bouts of epistaxis, and a prominent bony swelling arising from the manubrium sterni [Figure 1]. Evaluation with a computed tomography (CT) scan of the PNS revealed an irregular lytic lesion measuring 7.9×3.8 cm involving the right maxillary sinus with extension to the ethmoidal sinuses, sphenoid sinus, greater wing of sphenoid, and basi-sphenoid [Figure 2a]. The soft tissue infiltration was noted in the right retrobulbar space, which caused extra axial proptosis in the right eye. A bone scan confirmed increased uptakes in the multiples PNSs, corresponding to the tumor, and also in the manubrium sterni [Figure 2b]. A chest skiagram revealed multiple pulmonary nodules, suggestive of pulmonary metastasis. A diagnosis of metastatic follicular carcinoma thyroid was made; the same was confirmed by aspiration cytologies from the soft tissue component overlying the right maxillary sinus and from the manubrium sterni [Figure 3]. An attempted biopsy from the PNS tumor transnasally resulted in brisk bleeding, which was managed conservatively by anterior nasal packing. None of the lesions concentrated radio-iodine in a whole



Figure 1: Clinical photograph at presentation showing right facial swelling with proptosis and also the bony swelling arising from the manubrium sterni



Figure 2: (a) Evaluation with a CT scan of the PNS revealed an irregular lytic lesion measuring 7.9×3.8 cm involving the right maxillary sinus with extension to the ethmoidal sinuses, sphenoid sinus, greater wing of sphenoid, and basi-sphenoid; (b) A bone scan confirmed increased uptakes in the multiples PNS, corresponding to the tumor, and also in the manubrium sternum

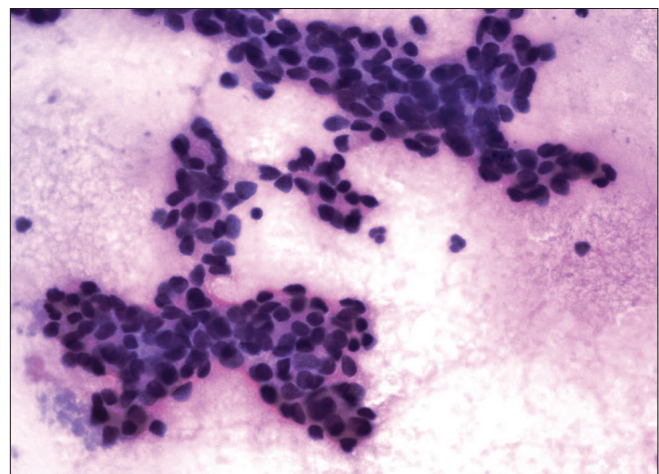


Figure 3: Aspiration cytology from the soft tissue overlying the right maxilla and the manubrium sterni swelling showing atypical follicular cells, suggesting a diagnosis of metastatic follicular carcinoma

body Iodine-131 scan. The patient was hence offered palliative external beam radiotherapy to the tumor bed in the PNS and the manubrium sterni. She continues to live with disseminated disease for the past 6 months on suppressive doses of thyroxin.

Follicular carcinoma is the second most common thyroid cancer, accounting for 15-20% of all thyroid gland malignancies. Distant metastasis, although relatively uncommon, has been known to occur more commonly to the lungs and bone. Radioactive iodine therapy is considered to be the first line of treatment for distant metastasis from thyroid carcinomas that concentrate radioiodine. External irradiation should be considered when the cancer is unresectable and in the palliation of bony, spinal, and brain metastasis.^[5] It is occasionally used as adjunctive therapy in the management of patients with advanced thyroid cancers and in recurrent tumors that do not concentrate radioiodine.^[5]

Metastases to the PNS usually respond poorly to treatment and usually have a poor prognosis.^[3] This report highlights the importance of suspecting metastases as a differential diagnosis of vascular tumors in the PNS in patients with a previous history of malignancy.

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REFERENCES

1. Prescher A, Brors D. Metastases to the paranasal sinuses: Case report and review of the literature. *Laryngorhinootologie* 2001;80:583-94.
2. Duque-Fisher CS, Casiano R, Vélez-Hoyos A, Londoño-Bustamente AF. Metastasis to the sinonasal region. *Acta Otorrinolaringol Esp* 2009;60:428-31.
3. Altman KW, Mirza N, Philippe L. Metastatic follicular thyroid carcinoma to the paranasal sinuses: A case report and review. *J Laryngol Otol* 1997;111:647-51.
4. Nikitakis NG, Polymeri A, Polymeris A, Sklavounou A. Metastatic papillary thyroid carcinoma to the maxilla: Case report and literature review. *Head Neck Pathol* 2012;6:216-23.
5. Brierley J, Sherman E. The role of external beam radiation and targeted therapy in thyroid cancer. *Semin Radiat Oncol* 2012;22:254-62.

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