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Case reports

Extramedullary plasmacytoma of the nasal sinus cavities

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Abstract This is case report of extramedullary plasmacytoma occurring in the nasal cavity. These are unusual tumors especially in the nasal area. Patients present mainly with nasal symptoms on the same side of the tumors. The treatment consists of surgery resection, or, radiation, or both. There is a fifty percent survival rate in five years.

1. Introduction

Extramedullary plasmacytomas are rare tumors. They make up less than 1% of all head and neck malignancies. Approximately 3 of 100000 occur annually [1]. Plasmacytomas can present as either medullary or extramedullary neoplasms. The extramedullary plasmacytomas mainly occur in the upper aerodigestive tract, with the nasal cavity and pharyngeal areas being the most common. These tumors arise in the submucosal tissues of these areas. The theory is that the submucosal tissue in the upper aerodigestive tract has an abundance of plasma cells. Plasma cell tumors cause a proliferation of plasma cells, leading to plasmacytomas. These tumors are either multiple or a solitary mass arising in the head and neck region. Most commonly, they present as a solitary lesion. Plasmacytomas are more common in males, with a male-to-female ratio of 4 to 1. These tumors usually occur in the fifth to sixth decade of life [2].

This case presented a young, Afro-American woman with an extramedullary plasmacytoma of the nasal cavity. She had nasal and visual symptoms.

2. Case report

A 32-year-old Afro-American woman presented in the ENT clinic with an asymmetrical facial pain, periorbital swelling on the right, blurred vision, nasal pressure, and right nasal congestion with epistaxis. The patient admits to all of these symptoms beginning 2 weeks before seeking assistance.

On physical examination, the patient presented with a right intranasal mass with a large protrusion into the nasal ethmoid area, pushing in the direction of the medial canthus. She had some blurred vision at the time, but no visual loss. The remaining head and neck examination was unremarkable. A nasal endoscope was performed. A red polypoid mass was shown eroding into the right middle turbinate and the right osteomeatal complex. A computed tomography scan was obtained in axial and coronal views. The computed tomography scan showed a mass in the right maxillary area extending into the right frontoethmoid area. The right frontoethmoid area showed an expanding mass into the periorbital area, but did not involve the globe. (Figs. 1 and 2).

The patient was taken to the operating room, and a biopsy was obtained. The cytology revealed an extramedullary plasmacytoma of the right maxilla. Computed tomography scans of the lungs, abdomen, and pelvic area were performed and were negative for any other areas of involvement. This was a solitary mass of the nasal cavity with extension in the periorbital area. The patient was scheduled for surgery, which included image-guided functional endoscopic sinus surgery. The mass was completely removed from the right maxillary sinus, as well as the frontoethmoid and frontal sinus areas. She tolerated the procedure without any difficulties. After surgery, she had radiation to 3 areas: right maxillary sinus, frontoethmoid area, and the frontal sinuses. She was worked up for

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multiple myeloma before the treatment, and all results were negative. She is presently 5 years out with no evidence of recurrence.

3. Discussion

Plasmacytomas are rare tumors. They can occur as a solitary mass in the bone or extramedullary mass in the reticuloendothelial cells. Approximately 90% of the extramedullary plasmacytomas occur in the upper aerodigestive tract [1]. Plasmacytomas make up about 1% of all head and neck malignancies. Approximately 50% of extramedullary occur as a solitary mass, whereas 20% present in multiple areas [2]. This patient had extramedullary plasmacytomas that occurred in the 3 areas in the nasal cavity; the first being the maxilla, the second the frontal sinuses, and the third the frontoethmoid area. Extramedullary plasmacytomas originate from plasma cells with a single class of heavy and light chains in a monoclonal proliferation of B cells [3]. These tumors mainly arise in submucosal areas with an abundance of plasma cells. In decreasing order of occurrence, they also occur in the following areas: the nasosinus area, the pharynx, the gastrointestinal tract, and the colon. Extramedullary plasmacytomas have been associated with multiple myeloma; because both affect the reticuloendothelial cells, it is rare for both to occur together.

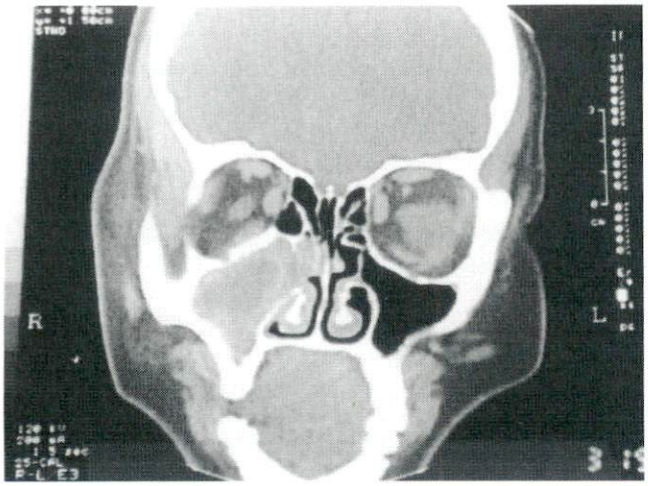

Fig. 1. Computed tomography scan of the plasmacytoma in the maxillary and ethmoid areas.

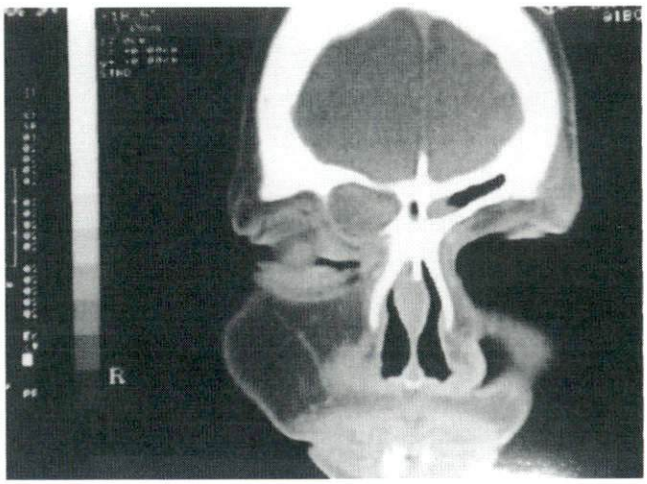

Fig. 2. Computed tomography scan showing the plasmacytoma in the frontoethmoid and in the frontal area over the eye.

There is a male-to-female ratio of 4 to 1 and mainly occur in the ages of 50 to 60 years [2]. Most of the symptoms include nasal pain, nasal obstruction with congestion, epistaxis, and bone pain.

The treatment of extramedullary plasmacytomas is surgical resection, radiation, or a combination of both. If the tumor is small, surgery alone is indicated. With larger tumors, both are required for a greater chance of survival. The 5-year survival rate is approximately 50% [4]. Chemotherapy is only indicated when there are multiple lesions that occur other than the primary sites. The prognosis is more favorable when a lesion reoccurs in a solitary mass rather than in multiple areas.

References

[1] Fayvouz T, Jose B, et al. Solitary plasmacytoma. J Surg Oncol 1983;24:46-8.

[2] Windfuhn J, Ott G. Extramedullary plasmacytoma manifesting a palpable mass in the nasal cavity. Ear Nose Throat J 2002;81(2):110-4.

[3] Schabel S, Roger C, Rittenberg G, et al. Extramedullary plasmacytoma. Radiology 1978;1238:625-8.

[4] Shreif J, Covonas P, Mastonikolis N, et al. Extramedullary plasmacytoma of the nasal cavity. Otolaryngology. Head Neck Surg 2001;124:119-20.