induced sarcoma ranges between 10 Gy and 30 Gy[4,5]; nevertheless, the development of osteogenic sarcomas in irradiated patients is an uncommon complication of radiotherapy treatment (0.03% to 0.08% of all patients).[6] Radiation-induced sarcoma has a bimodal pattern of age distribution; the highest incidence of radiation-induced sarcoma is for ages 10 to 19 years, and a second peak occurs after the age of 50 years.[7] Various predisposing factors have been proposed, such as the mutation in tumor-suppressor genes such as *p53* and retinoblastoma gene. Furthermore, children seem to be more susceptible than adults.[8] The spectrum of malignant neoplasms secondary to radiation of head and neck pathologies includes skin, thyroid, and bone neoplasms.[3] The most frequent radiation-induced sarcoma is fibrosarcoma, and osteosarcoma is extremely rare.[9] Four diagnostic criteria are necessary to define radiation-induced sarcoma: previous radiotherapy treatment, latency period of at least 5 years,[5] appearance of the sarcoma in an irradiated area, and histologic confirmation of the diagnosis. Histologic proof of the tumor is also necessary to distinguish it from other radiotherapy changes such as osteonecrosis; in our case, clinical findings not correlating with histopathologic ones induced us to perform a radical surgery. Radiation-induced osteosarcoma is characterized by more aggressive features, and prognosis is poorer than that associated with spontaneous sarcomas, with a 5-year survival ranging between 15% and 30%.[10] In craniofacial osteosarcomas, the 5-year survival rate is 70% in primary osteosarcomas and 17% in radio-induced osteosarcoma. Prognostic factors include the presence of metastatic disease, free margin resection (>5 mm) in patients with localized disease, the size of the primary tumor neurosensory symptoms at presentation, and increasing patient age.[9] The mainstay of therapy is surgical resection in free margins because these tumors generally are resistant to chemotherapy and radiation therapy. Postirradiation sarcoma of the skull has a worse prognosis than those of the extremities because of their aggressive pattern of local growth and recurrence and because of the difficulties in obtaining a radical surgical resection.[7] Although in the case of cancer the benefit of radiation therapy justifies the exposure to this very small risk, it is not true in the case of benign lesions because, in those cases, the benefit of the radiation therapy is not high. In those cases, alternative methods to radiation therapy have to be considered.

Andrea Cassoni, MD, PhD
Maxillofacial Surgery
Odontostomatological Science and
Maxillofacial Surgery Department
"Sapienza" University of Rome
Viale del Policlinico
Rome, Italy

Valentina Terenzi, MD, PhD
Maxillofacial Surgery
Odontostomatological Science and
Maxillofacial Surgery Department
"Sapienza" University of Rome
Viale del Policlinico
Rome, Italy
v.terenzi@libero.it

Andrea Battisti, MD, PhD
Marco Della Monaca, MD
Rajabtork Zadeh Oriana, MD
Maxillofacial Surgery
Odontostomatological Science and
Maxillofacial Surgery Department
"Sapienza" University of Rome
Rome, Italy

Sandro Bosco, MD
Angelina Pernazza, MD
Molecular Medicine Department
"Sapienza" University of Rome
Rome, Italy

Valentino Valentini, MD
Maxillofacial Surgery
Odontostomatological Science and
Maxillofacial Surgery Department
"Sapienza" University of Rome
Rome, Italy

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Giant Nasal Septal Osteoma Arising From Perpendicular Lamina of the Ethmoid Bone

To the Editor: Osteomas of the nasal cavity and paranasal sinuses are one of the most common benign fibro-osseous neoplasms.[1] They consist of mature compact or spongious bone.[1,2] The rate of occurrence for this neoplasm ranges from 0.43% to 1% in the general population and is more frequently seen in the second to fifth decades.

In this article, we present the clinical, radiologic, and endoscopic excision features of a giant osteoma arising from the perpendicular lamina of the nasal septum.

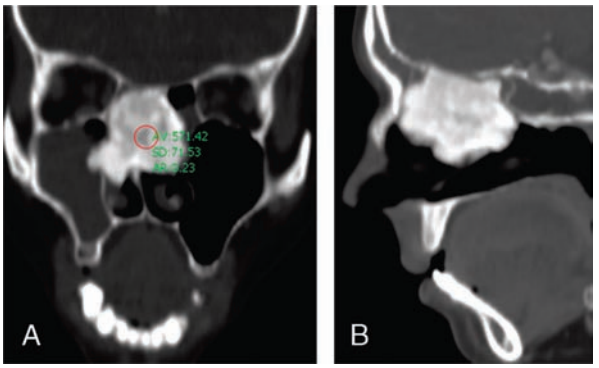

FIGURE 1. Coronal (A) and sagittal (B) computed tomographic images. The mass lesion in the upper nasal cavity and density consistent with a giant osteoma. The mass lesion shows extension into the right maxillary sinus.

The patient was a 48-year-old woman with a 3-year history of hyposmia, headache, and blockage of the nasal airflow. Headaches and nasal obstruction had remarkably increased in the last year, and she had added anosmia to her complaints. She had no history of trauma, surgery, or infection. There was a solid mass that filled the upper part of the nasal passages observed during the rhinoscopic examination. Computed tomographic scan revealed a 40×37-mm mass completely occupying both the nasal cavity of the upper part of the inferior turbinate that extended into the right maxillary sinus (Fig. 1). The endoscopic drill cavitation technique was performed under general anesthesia. Intraoperatively, the osteoma was seen to arise from the perpendicular lamina of the ethmoid bone; the margin in the coronal plane compressed the frontal recess, lamina papyracea, and maxillary ostium. The core of the osteoma was drilled out from the center toward the periphery, and a thin, hollowed bone shell was obtained. This shell was fractured easily and removed transnasally (Fig. 2). No postoperative complications were observed. In the histopathology of the mass, it was found that the osteoma (ivory type) was composed of dense, mature, predominantly lamellar bone beneath the ciliated pseudostratified epithelium of the sinus (Fig. 3). The patient was followed up for 6 months postoperatively. Her complaints of headache and nasal obstruction were completely resolved, but the anosmia persisted.

Nasal and paranasal osteomas are the most common fibro-osseous lesions.[1–3] The majority of them arise from the frontal sinus and frontoethmoidal junction, whereas other sinuses and nasal septum are localized more rarely.[3] When we reviewed the literature, we found a total of 4 septal osteoma case reports.[4,5] Guthrie[4] and Takeshita et al[5] reported an osteoma arising from the vomer or the posterior margin of the septum.

Osteomas are histopathologically classified as compact (ivory), mature (spongious), and mixed.[1,3] Histologically, ivory is the rarest.[2]

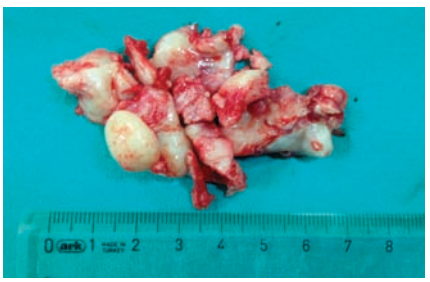

FIGURE 2. The picture of the transnasally excised osteoma.

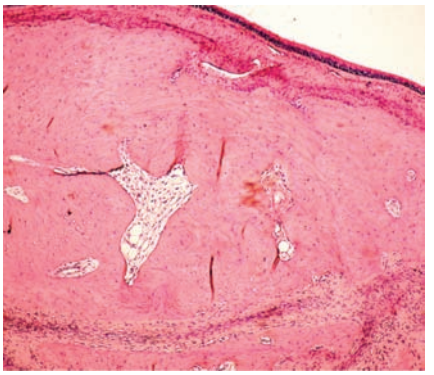

FIGURE 3. Hematoxylin-eosin × 40 lesion composed of mature, dense, compact, cortical-like bone, predominantly lamellar bone beneath the ciliated pseudostratified epithelium of the sinus.

The symptoms of osteomas usually depend on their mass effect and localization. Headache is the most common complaint.[3] Computed tomography is the criterion standard for diagnosis.[1,3]

Surgical excision is the primary treatment modality in symptomatic patients with osteoma. According to the location and size of osteoma, open (external), nasal endoscopic, or combined surgical excision techniques can be used for the removal.[1,3]

Murat Sahan, MD
Serhan Derin, MD
Department of Otolaryngology
Mugla Sitki Kocman University
Mugla, Turkey

Nesat Cullu, MD
Mehmet Deveer
Department of Radiology
Mugla Sitki Kocman University
Mugla, Turkey

Leyla Sahan, MD
Department of Anesthesiology and Reanimation
Mugla Sitki Kocman University
Mugla, Turkey

Ozgur Ilhan Celik, MD
Department of Pathology
Mugla Sitki Kocman University
Mugla, Turkey

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