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Ectopic compound odontoma of the nasal cavity

KEYWORDS

Compound odontoma;
Odontogenic tumor;
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The occurrence of an odontoma in the nasal cavity is extremely rare.^{1–3} Here, we presented an ectopic compound odontoma at the left nasal floor of a 16-year-old male patient.

This 16-year-old male patient suffered from bloody and purulent discharge with malodor in the left nose for 2–3 months. He was treated with several courses of antibiotic in local clinics but the symptoms and signs did not improve. Thus, he came to our ear, nose, and throat (ENT) department for further treatment. Nasopharyngoscopy revealed a protruding mass covered by a purulent and bloody crust at the left nasal floor. Facial paranasal sinuses computed tomography (CT) without contrast medium revealed a radiopaque tooth-like mass at the left nasal floor (Fig. 1A). The clinical diagnosis was a compound odontoma. After discussing with the patient and obtaining the signed informed consent, enucleation of the radiopaque mass was performed with sinuscopy under local anesthesia. Two hard tissue fragments and the associated granulation tissues were removed and sent for histopathological examination. Grossly, the hard tissue specimens looked like two small tooth-like structures. Microscopically, the decalcified hard tissue specimens were actually small malformed teeth (Fig. 1B and C). The small tooth-like structure consisted mainly of dentin with a thin layer of cementum on the outer surface (Fig. 1D). The enamel was lost during the decalcification process with the dentin left and the residual scalloped dentinoenamel junction exposed (Fig. 1E). In

addition, the dentine was composed of dentinal tubules, and irregular areas of interglobular dentine were discernible (Fig. 1F). The above-mentioned characteristic findings finally confirmed the histopathological diagnosis of a compound odontoma.

The odontomas are the most common types of odontogenic tumors.⁴ The total number of odontomas exceeds that of other odontogenic tumors combined. Odontomas are further divided into compound and complex odontomas. The compound odontoma consists of multiple small tooth-like structures, and the complex odontoma is composed of a conglomerate of enamel and dentin, which does not resemble a tooth. Odontomas occur more commonly in the maxilla than in the mandible. The compound odontomas are more frequently found in the anterior maxilla, and the complex odontomas occur more often in the molar regions of the maxilla and the mandible.⁴

Although the compound and complex odontomas in the nasal cavity have been reported in the literature, the ectopic odontomas in the nasal cavity are truly very rare.^{1–3} When the odontoma is located near the surface of the nasal floor, it may get infected, and bleeding and pus discharge with malodor may happen like the symptoms and signs occurring in this case. After simple removal of the ectopic odontoma and antibiotic coverage for a few days, the symptoms and signs associated with the odontoma may improve and finally disappear. The prognosis of the odontoma is excellent after simple local excision.⁴

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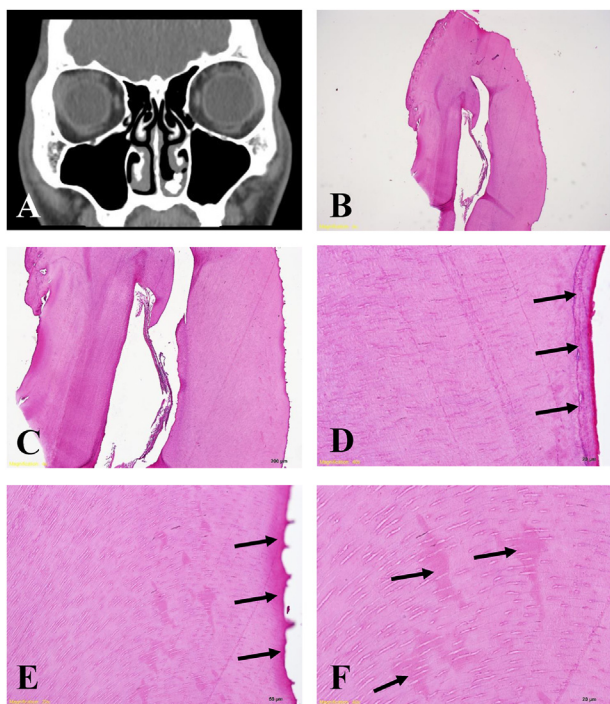


Figure 1 Computed tomography (CT) and histopathological photographs of the ectopic compound odontoma of the nasal cavity. (A) CT image revealing a radiopaque tooth-like mass at the left nasal floor. (B and C) Low-power microphotographs showing a small malformed tooth. (D) High-power microphotograph exhibiting that the small tooth-like structure consisted mainly of dentin with a thin layer of cementum (arrows) on the outer surface. (E) High-power microphotograph showing that the enamel was lost during the decalcification process with the dentin structure left and the residual scalloped dentinoenamel junction (arrows) exposed. (F) High-power microphotograph showing that the dentine was composed of dentinal tubules, and irregular areas of interglobular dentine (arrows) were discernible. (Hematoxylin and eosin stain; original magnification; A, 2 × ; B, 4 × ; C, 10 × ; D, 40 × ; E, 20 × ; and F, 40 ×).

Declaration of competing interest

The authors have no conflicts of interest relevant to this article.

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