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COMMENTARY

A colossal complex odontoma

Mohammad Akheel

Broca in 1866 introduced the term odontoma as a tumor consistent with dental tissue overgrowth [1]. Classified as compound and complex subtypes, odontomas constitute approximately one-fifth of all odontogenic tumors. The WHO defines complex odontomas as tumor-like malformations, in which all the dental tissues are represented, and individual tissues are well formed but in disorderly pattern [2]. Complex odontomas usually occur in the first and second decades of life [3] and affect the first and second molar region with slight or marked cortical expansion [4]. Complex odontomas have also been considered as hamartomas or tumor-like malformations of dental tissues or as developmental anomalies rather than true odontogenic neoplasms. The pathogenesis is linked to trauma during primary dentition, hereditary anomalies such as Gardner's syndrome, Hermann's syndrome, basal cell nevus syndrome, and finally odontoblastic hyperactivity or alterations of the genetic components responsible for controlling dental development. Radiologically, these appear as a radiopaque mass, not resembling tooth structure. Histologically, complex odontomas are characterized by sheets of immature tubular dentin with encased hallow tooth-like structures with ghost cells. While radiological evaluation can provide clues to initial diagnosis, potential differentials include other odontogenic tumors such as fibroodontoma, ameloblastic fibroma, and odontoameloblastoma. For symptom remission, meticulous surgical excision is warranted while preserving the adjacent structures including permanent tooth buds or germs. Follow-up can aid in monitoring development of the permanent dentition at the surgical site. As a dictum, histopathological evaluation should follow surgical excision for confirmatory diagnosis.

The recent article by Karobari et. al. highlights a case of an adolescent male with unilateral mandibular swelling [5]. Lack of timely access (~3 months since pain onset, 1 month since swelling) to health care led to pus formation and multiple discharge points intraorally. Although clinical diagnosis was suggestive of an infective odontogenic cyst, imaging along with histopathological evaluation was pertinent in reaching a definitive diagnosis. Computed tomography scan and orthopantomogram demonstrated a densely calcified lesion measuring 3 cm × 3.5 cm with radiolucent halo in the posterior left mandible. This was associated with buccal and lingual cortical expansion and areas of cortical breach at places with medially displaced unerupted first molar. Radiological findings were suggestive of a complex odontoma. The patient underwent surgical excision under general anesthesia. Histopathological findings confirmed the diagnosis as a complex odontoma.

In contrast, compound odontomas are twice as common and have a female preponderance [6]. Over three-fourths of all odontomas are associated with pathologic changes such as malpositioning, impaction, aplasia, malformation, and devitalization of adjacent teeth. Complex odontomas occur in mandibular.

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Competing Interests

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Head and Neck Oncosurgeon, Greater Kailash Hospital, Indore, India.
E-mail: drakheelomfs@gmail.com