Multiple exophytic osteomas of craniofacial bones not associated with Gardner’s Syndrome: a case report

Summary

Exophytic osteomas are mature bone protuberances required to be carefully differentiated from other lesions. The authors present a male, 44 year-old patient’s report presenting multiple exophytic osteomas located in both sides of the vestibulomaxillary, premolar and molar regions not-associated with Gardner’s Syndrome.
Exostosis and tori are well-known by anthropologists and the first article was published by Fox (1814)\(^1\). Exostosis, osteomas and tori are bone nodular protuberances whose precise designation depends on the anatomical location \(^2\).

Exostoses are benign bone growth of facial skeleton that occur along the maxilla and mandible regions and are frequently located in the pre-molar and molar regions \(^3\).

Torus palatinus and mandibularis are the two most common intra-oral growths; palatinus torus is a nodular bone mass that occurs along the midline of hard palate and mandibularis torus is a bone protuberance located on the lingual aspect of the mandible, normally in the region of canine and pre-molars \(^2\). The histological characteristic of tori and other types of exostoses are identical, that is, described as hyperplastic bone, comprising mature trabecular and cortical bone \(^4\).

Osteomas are bone lesions with different onset and slow growth that may be divided into: (1) cranial and mandibular exophytic osteomas (or eburnean exostoses); (2) paranasal sinuses, facial bones and orbit osteomas (orbital cavity osteoma); (3) exostoses or bone islands, (4) long bone superficial osteomas (justacortical) \(^5\).

**CASE REPORT**

C. E. P. J., male 44-year-old patient, born and coming from São Paulo, was referred to the division of Stomatology, HSP, Escola Paulista de Medicina (UNIFESP), complaining of gum enlargement in both sides of lower pre-molar and molar regions.

Clinical examination showed that it was a nervous patient that reported history of included permanent and supernumeric teeth. Even though the patient presented well-restored dentition, there was wear of occlusal aspect of pre-molars and molars, with excessive occlusal forces and thick masseter muscle on both sides. Bone multiple protuberances were evident in the vestibule-maxilla region on both sides (Figure 1). The approximate diameter of bone lesions ranged from 0.5 to 2.0cm; radiological study detected radiopaque images, hiding details of the teeth and maxillary sinus (Figure 2).

Oral findings were suggestive of the diagnosis of Gardner’s syndrome. Owing to the likelihood of Gardner’s syndrome be associated with intestinal tumors, we decided to investigate this condition and the patient was submitted to gastroenterological assessment. We also sent a blood sample to the discipline of clinical genetics for analysis. Gastrointestinal endoscopy and colonoscopy were within the normal range, with no polyps detected. Hetero-duplex analysis of cholopolyposis adenomatous gene (CPA) codified area, located in chromosome 5q21, did not identify any abnormality. Thus, suggestive management recommended surgical removal of bone anomalies and regularization of maxillary margins. Clinical pathology indicated the diagnosis of exophytic osteoma (Figures 3 and 4). The patient was referred to physical therapy for muscle hyperfunction. He was fitted with Michigan stabilizing splint to correct mastication parafunction.
dorsal region, with occasional frequency of dermoid tumors and included permanent and supranumeric teeth. Most patients with Gardner’s syndrome do not show complete clinical picture of the disease: the term binary for Gardner’s syndrome has been applied to subjects that have 2 or 3 of the aspects traditionally described.

Bone lesions in Gardner’s syndrome are not real neoplasms. Moreover, the presence of osteoblastoma analog areas, predominantly seen in sino-orbital sporadic osteoma, is not an aspect of bone lesions in Gardner’s syndrome. Colon and rectum digestive endoscopy for detection of intestinal polyps and genetic analysis were subsequently used to exclude Gardner’s syndrome in this patient. Even so, this case showed the important role researchers have to use oral care in excluding systemic diseases with oral manifestations.

To conclude, the term exophytic osteoma would be better employed than exostosis, commonly used in the literature, given that it indicates only growth pattern of bone surface and not the histopathological aspects.

**REFERENCES**

1. Fox J. The natural history and diseases of the teeth. London; 1814.

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**Figure 1.** Multiple maxillary bone protuberances.

**Figure 2.** Panoramic x-ray showing radiopaque images hiding details of teeth and maxillary sinus.

**Figure 3.** HE 40x photomicrography. Exophytic osteoma. In smaller magnification, we can see the presence of exophytic lesion, forming a bone tissue bulging.

**Figure 4.** HE 100x photomicrography. Exophytic osteoma. Eburnean exostosis. Detail in larger magnification of previous image showing typical lamellar bone.