



Multiple Maxillary Tuberosity Exostosis

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Abstract

Multiple intra oral bony tori and exostosis have often been reported in the literature to occur in the mandible. In the maxillary arch the tori has been reported to occur usually in the midline and has been termed as torus palatinus. The present case is novel as it reports a case of multiple exostoses on the lateral aspects of the slopes of the palate in the region of maxillary tuberosity where it rarely reported. A single bony extension also existed beneath the overlying palatine rugae. Multiple minute ulcerations were also observed distant to the site of bony exostosis.

Keywords- ulcer, hard palate, tuberosity, palatine rugae, torus mandibularis

Introduction

Tori and bony exostosis have been reported in the literature often simultaneously and both are basically lesions that present as surface masses and are removed surgically with ease. ¹Their significance is often associated with their size, in which case they need to be differentiated from other hard tissue conditions like peripheral ossifying fibroma. While the torus is considered to be a developmental anomaly and may not present until adult life, the other chief difference from bony exostosis is in number and the location. ² Torus

usually occurs in or close to midline and is usually bilateral whereas exostoses is randomly distributed and are multiple. ² They often are present buccally in the mandible.

Maxillary arch usually has been reported to be associated with single tori in the midline and is often called as torus Palatinus. ² Most of the tori are usually less than 2 cms in diameter, but can change throughout life. Cases of bony exostosis are rare and this article presents a unique case of multiple bony exostoses in the maxilla including one under the

palatine rugae along with multiple minute and single large ulceration of the hard palate.

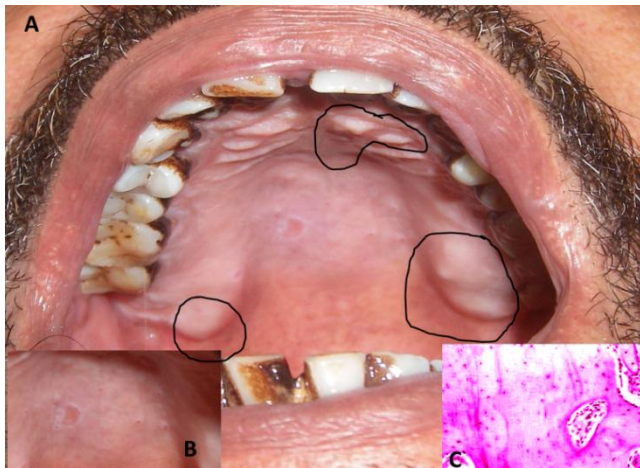


Figure 1: (A) Intra oral view showing areas of bony exostosis (encircled). The exostosis beneath the palatine rugae is situated on the left side (B) Ulceration of the mucosa not associated with the condition (C) Histological features of bony exostosis showing dense bony tissue, presence of lacunae along normal osteocytes.

Clinical Case report

A male patient aged 38 years, reported to the department of Prosthodontics for placement of single crown in relation to an endodontically treated mandibular right first permanent molar. The tooth in question had undergone a root canal treatment about 3 months back. Medical, drug and social history were non-contributory. Dental history revealed that the patient had caries in relation to the concerned tooth and had developed an acute pulpitis for which he had sought treatment first locally followed by endodontic procedure. Patient history also revealed that he was a chronic smoker and used to consume tobacco occasionally. Extra oral features were normal with no evidence of lymph node enlargement. Intra oral examination revealed calculus deposits in relation to mandibular anteriors

and dark brown stains that were even present on occlusal surfaces. Hard tissue examination revealed presence of multiple bony enlargements (Fig 1A) in the region of the maxillary tuberosity over the hard palate. An additional bony enlargement that was firm and immovable was present in relation to one of the palatine rugae on the anterior portion of the palate. Distant to the bony enlargements were minute multiple ulcerations with one big ulcer present on the right side of the mid palatine raphe (Fig 1B). All the bony lesions were present since birth and the patient had never developed any problems except the anteriorly placed exostosis would irritate the tongue at times.

The patient was referred to the department of oral medicine and radiology where clinical, radiographic and histological investigations were done (Fig 1 C). Meanwhile the patient was presented with a treatment plan of oral prophylaxis and oral hygiene maintenance to be followed by a single metal ceramic (buccal facing) crown in relation to endodontically treated mandibular first molar. Routine clinical and laboratory procedures were followed for single crown fabrication. The crown was cemented at a later date using Zinc phosphate (Harvard, Germany) cement.

Discussion

In today's population tori are seen to have become a common occurrence which in fact has hypothesized its etiology to be as a result of stresses on the bone often found in nervous and anxious personalities. Exostosis are usually found in females with a 0.9% prevalence and are non-pathologic bony responses due to the fact that they are found in adults and

continue growing in size with age.^{3,4} In this case report, we attempt to bring forth a highly odd variety of bony exostosis of the palate. Contrary to reported cases, multiple bony exostosis were found in this case on both slopes of the alveolar bone in the region of the maxillary tuberosity and one lesion entirely directly under the Palatine rugae. Although the etiology has been discussed without consensus, the present case shows a strong relationship between the increasing age and occurrence of the exostosis. Exposure to rigid functional activity causes a reactive outgrowth in response to the functional influences in genetically predisposed population.⁵⁻⁷

Less commonly solitary exostosis may occur in response to local irritation from the alveolar bone, but in present case occurrence of bony protuberance under the Palatine rugae on the left side does not fall in accordance with such a theory. The site of Palatine rugae is rare and often not an area where stress concentration within or outside the cortical or cancellous bone prevail. However the two lesions present in the tuberosity region do fulfill such criteria.

Clinical implications of bony exostosis has been discussed in the literature, however, for prosthodontist such lesions may be advantageous or disadvantageous. Depending upon size, number, location each exostosis may provide its own advantages and/or hazards that may be related to impression making, utilization of undercut, increased fulcrum points within the prosthesis, complaints of excessive soreness under the prosthesis or loss of retention and stability of the dental prosthesis.

Conclusions

Maxillary exostoses are not only rare, but they have not been reported to occur at the site that has been reported in this article especially in the vicinity of Palatine rugae.

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