Short Case Report

Mandibular tori interfering with the mobility of the lingual frenulum: a short case report

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(Received: 28 July 2020, accepted: 7 September 2020)

Keywords:

Exostosis / mandible /
lingual frenulum

Abstract – Introduction: Tori are benign hamartoma-like bone excrescences, usually asymptomatic. Their removal should not be systematic. **Observation:** A 62-year-old patient showed bilateral tori only leaving a 1.5 mm space for the lingual frenulum path between them. The direct functional consequence was a frequent blockage of the salivary caruncles below the tori. Tori resection was performed under local anaesthesia. Surgical outcome was simple with conventional analgesic treatment and oral care. Comfort and function were immediately restored. **Discussion:** The originality of this case does not lie in the nature of the lesions but in the uncommon size of their hypertrophy, which caused a lingual functional impairment. We have not found a similar case described in the literature.

Observation

The reported clinical case concerns a 62-year-old Caucasian male, referred by his dental surgeon because of a significant increase in the volume of his mandibular tori, known since childhood. General health history found that the patient was suffering from benign prostatic hypertrophy. He was on medication with *Serenoa repens* extract and Alfuzosin. On endobuccal examination, there were bilateral tori, approximately 12 mm thick in the transverse plane, and only leaving a 1.5 mm space for the lingual frenulum path between them (Fig. 1). The direct functional consequence was a frequent blockage of the salivary caruncles underneath the tori (Fig. 1). A radiological examination with Cone Beam Computed Tomography (CBCT) revealed well delineated radiopaque masses (Fig. 2). Tori resection was proposed to the patient. The intervention was performed under local anaesthesia (Articaine 4% with epinephrine 1/200,000). A mucosal incision was performed. Its line followed the groove between the lingual alveolar table and the upper part of tori (Fig. 3). The tori were cut with a fissure burr mounted on a surgical motor (WH Elcomed, Bürmoos, Austria). Excess mucosa was then resected and closure was performed with resorbable thread (Fig. 3). The procedure took about an hour and a half, without any complications.

Post-operational follow-ups were simple. The patient took analgesics (paracetamol and codeine) and a chlorhexidine

mouthwash for 14 days. Comfort and lingual function were immediately restored. Anatomopathological examination revealed compact bone tissue compatible with mandibular tori. The patient was seen again 2 months after surgery. He described a slight transient voice disorder: it took him 2 days after surgery to recover the habit of positioning his tongue back to normal position. Mucosal and bone healing was achieved (Fig. 4). His dental surgeon was advised to provide him annual follow-up to intercept any recurrence of the lesions.

Comments

A torus is a benign hamartoma-like bone excrescence, usually asymptomatic. Tori are mostly present in the oral sphere, but can also be found in other bony parts of the human body.

The originality of this case does not lie in the nature of the lesions but in the size of their hypertrophy (40 mm in the antero-posterior direction (sagittal plane) and 12 mm in the lateral one (transverse plane)), which lead to a deficit in lingual function. We have not found any similar case described in the literature.

The exact aetiology of these bone excrescences is not yet clearly established. It is likely multifactorial and involves an association of genetic factors such as autosomal dominant inheritance [1] and environmental factors such as masticatory stress, the presence of teeth, a diet rich in calcium, unsaturated fatty acids and vitamin D [2]. No hereditary factor was found in this patient. Neither did he show clinical

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Fig. 1. Initial views: (a) small space available for the lingual frenulum; (b) blocking of the salivary caruncles.

Fig. 2. CBCT scan (left axial and right coronal slice): radio-opacity of exostosis.

signs of bruxism (dental attrition, temporomandibular joint dysfunction, etc.). All the teeth were present on the arch, which supports the theory of the alveolar origin of mandibular tori. One hypothesis suggests that the torus formation would be caused by a dynamic phenomenon rather than by an increased progression of the bone [2]. This patient showed a progressive growth of the tori since childhood. He only alerted his dental surgeon when they began to cause a blockage of the lingual frenulum.

Regarding the surgical technique, some authors rather perform the ablation of large tori under general anaesthesia [3]. However, in this case, after explanation about the intervention technique, the choice of local anaesthesia surgery appeared preferable to both the patient and the surgical team. In order to preserve the attached tissue around the teeth, a mucosal incision was preferred to the sulcular incision traditionally performed in dentate patients [4]. This incision design made flap elevation and mucosal suture more difficult, but we believe that it could preserve the gum from

surgical trauma. Several procedures for surgical tori cutting are described in the literature, notably the piezo-surgery. This technique has many advantages (less invasive cutting, less noise and less vibration in particular) [5]. Considering the bone density and the volume of the tori in this case, we however used a burr on a surgical motor for a quicker intervention.

The larger the torus, the greater is the ratio of cancellous bone to cortical bone [4]. In this case, despite the quite large volume of the tori, they appeared to be only composed of cortical bone (Fig. 3).

In conclusion, due to their benign nature, the removal of these excrescences should not be systematic, especially because of the risks of traumatic, haemorrhagic and nervous complications during surgery. In this case, the indication for removal was a functional impairment of lingual mobility and blockage of the salivary caruncles.

Conflicts of interest: All the authors of this article report no conflict of interest regarding this work.

Fig. 3. Intraoperative views: (a) after incision and detachment; (b) after sutures; (c) surgical bone specimens.

Fig. 4. Endobuccal view: 2 months postoperative.

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