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Osteoma in medial pterygoid muscle: an unusual case

B. JANJATOV[1], M. ERIĆ[2], D. ŠOJIĆ[3]

[1]Department of ENT and Maxillofacial Surgery, General Hospital, Sremska Mitrovica (Serbia)
[2]Deparment of Anatomy, Faculty of Medicine, Novi Sad (Serbia)
[3]Department of Pathology, General Hospital, Sremska Mitrovica (Serbia)

Abstract. – Soft tissues osteoma is an exceedingly rare tumour. It is a benign often asymptomatic neoplasm. The exact etiology and pathogenesis of osteomas are unclear. This paper report a case of peripheral osteoma located in the middle part of the medial pterygoid muscle of the right infratemporal region in a 60-year-old woman. Clinical examination did not reveal any extraoral swelling, facial asymmetry or difficulty in mouth opening, and the regional lymph nodes were non-palpable. Panoramic radiograph show a round well-circumscribed free/independent radiopaque mass located in the middle part of the right infratemporal region. Intraoperatively, the mass was surrounded by muscle fibers with no attachment to bone. Microscopic examination revealed mature bone without special characteristics. The precise location of an osteoma in the muscle is usually in close proximity to regions of muscle attachment it is possible that muscle traction may play a role in its development.

Key Words:

Peripheral osteoma, Soft tissue, Medial pterygoid muscle, Bone forming neoplasm.

Introduction

Osteoma is a slow-growing, benign and uncommon neoplasm located primarily in the region of the maxillofacial skeleton[1]. By localization they are devided into central and peripheral, and into osteomas of the soft tissues usually develop within a muscle[2,3].

In the head and neck region they are commonly seen in the frontoethmoidal region. Occipital and sphenoid osteoma is an extremely rare lesion. They are often asymptomatic and are incidentally found on radiological investigations. The main clinical symptom is headache of varying intensity and quality, though some patients may complain of dizziness in cases of large tumours[4,5].

Soft tissues osteoma is an exceedingly rare tumour, most of the previously reported cases have occurred in the tongue and the skin[6,7]. These lesions are often asymptomatic and incidentally discovered. However, they can produce pain or symptoms related to location. Multiple jaw osteomas are a frequent component of the Gardner Syndrome[1,8]. Osteomas frequently presenting in the third and fourth decades of life, predominantly occurs in women (female/male ratio 2/1)[9].

Here, we report a case of soft-tissue osteoma occurring in the middle part of the medial pterygoid muscle of the right infratemporal region.

Case Report

A 60-year-old woman was referred to the Stomatology Clinic Health Center Sremska Mitrovica for a regular examination by a dentist. After clinical examination and Panoramix RTG patient referred to the General Hospital - Department of ENT and Maxillofacial surgery.

The patient was in a good health condition, anamnesis was nonspecific.

Patient was without any symptoms. She has not any trauma of the head and traumatic bites or unusual habbits or manners like bruxism etc. Extraoral examination didn't show any swelling of the face and neck, facial asymmetry or difficulty in mouth opening and the regional lymph nodes were non-palpable. Intraoral examination (palpation) revealed in the middle part of the medial pterygoid muscle a firm round mass medially of the mandibular ramus, approximately 20×15 mm in size. A tumefact was located about 10 mm posteriorly from anterior edge of mandibular ramus.

Corresponding Author: Mirela Erić, MD, Ph.D.; e-mail: mirela.eric@gmail.com

Panoramix radiograph show a round well-circumscribed free/independent radiopaque mass size 12 mm, medially of the right mandibule ramus. The mass had no connections with any anatomical structures around (Figure 1).

Surgical approach was in local anesthesia, fibers of medial pterygoid muscle were separated and mass slowly removed. Intraoperatively, the mass was surrounded by muscle fibers with no attachment to bone. Passive drainage was applied and postoperative recovery was good.

Macroscopic examination revealed the specimen as round shaped white mass with smooth surface 14×10 mm. "Mass looks like child marble".

Microscopic examination revealed round-shaped mature bones without special characteristics (Figure 2). Histological feature indicated the diagnosis of cancellous osteoma of the medial pterygoid muscle.

Discussion

In the maxillofacial area peripheral osteoma occurs most frequently in the sinuses. Stuart first defined osteoma as a benign, circumscribed, slow-growing bony tumour[10]. The present case is the first osteoma originating from the soft tissue, middle part of the medial pterygoid muscle, respectively.

The exact ethiology and pathogenesis of benign bone lesion of soft tissue are unclear. Some authors give possibility of a reactive mechanism triggered by trauma and infection[11]. Other consider that the osteoma is a true neoplasm or some classify it as a developmental anomaly[2]. Since the tumour has been found to develop after puberty some authors believed it to depend on conditions regulating growth in the cranial bones[12]. Friedberg suggested trauma with consequent periostitis as a predisposing factor[13].

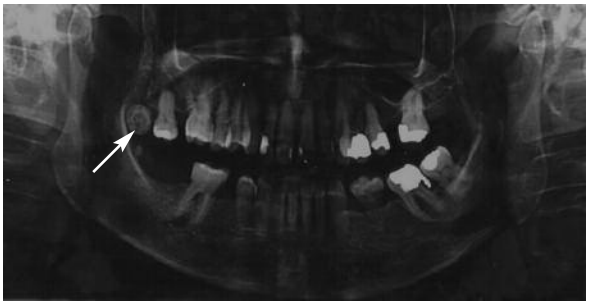

Figure 1. Radiopaque mass with well-circumscribed margins were shown medially of the right mandibule ramus.

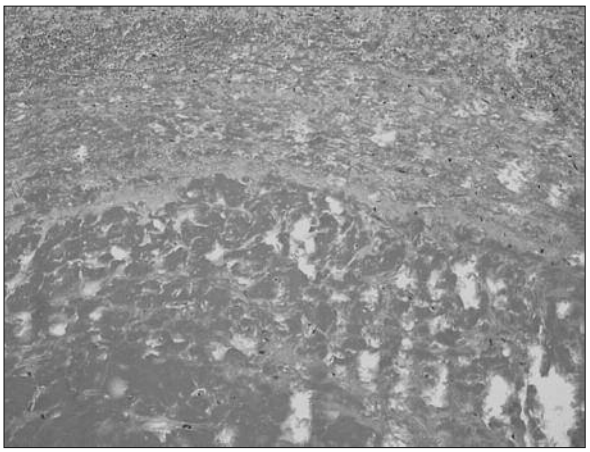

Figure 2. Microscopically, the round-shaped mature bone without special characteristics (hematoxylin-eosin staining; 40 × magnification).

Gardner and Richards have noted a possible association of osteomas and intestinal polyps[14].

The precise location of an osteoma in the muscle is usually in close proximity to regions of muscle attachment (i.e. masseter, medial pterygoid, temporalis), it is possible that muscle traction may play a role in its development[1,3].

To be defined as osteoma, lesion must arise spontaneously and not be secondary to trauma or inflammation not be of developmental origin and it should grow unattached to the periosteum or periarticular structures.

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