Saudi Journal of Pathology and Microbiology (SJPM) **ISSN 2518-3362 (Print)**
Scholars Middle East Publishers **ISSN 2518-3370 (Online)**
Dubai, United Arab Emirates
Website: http://scholarsmepub.com/

An Unusual Cause of Temporo Mandibular Ankylosis

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Case Report

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Article History
Received: 04.11.2018
Accepted: 12.11.2018
Published: 30.11.2018

DOI:
10.21276/sjpm.2018.3.11.4

Abstract: Temporomandibular ankylosis is defined as a permanent constriction of the temporomandibular joint. It can be an articular or juxta-articular origin, and includes various pathologies. We report here an unusual cause of temporo mandibular ankylosis which is an osteochondroma diagnosed by an anatomopathological study of the bone block. A 16-year-old patient who consults for a difficulty in opening the mouth. The clinical examination was without particularities. The cranian scan revealed the presence of a bony block at the right temporo mandibular joint with almost complete disappearance of the joint space.It was the histological examination of the osseous block that led to the diagnosis of osteochondroma.
Keywords: Ankylosis, excision, histology, osteochondroma.

INTRODUCTION

Background

The temporo-mandibular joint is the most mobile articulation of our organism. Temporo-mandibular ankylosis is defined as a permanent constriction of the temporo-mandibular joint. It may be of articular or juxta-articular origin, and includes pathologies varied [1, 2]. We report the case of temporomandibular osteochondroma in a 16-year-old patient. Also known as exostosis, osteochondroma is the most frequent benign tumors of the bone. It represents about 35% of all benign bone tumors. In the Majority of cases, it is localized to the epiphyses of the long bones, especially the femur and the humerus. Temporomandibular localization is exceptional and no case has been described in the literature.

CASE REPORT

It is a young patient aged 16 years without a special history, admitted in consultation for a difficulty to the opening of the mouth, Associated with a masticatory disorder and swallowing. The interrogation of the patient did not reveal a notion of recent facial trauma nor of the notion of an infectious syndrome**.** The clinical examination found a patient in good general condition with a blockage at the opening of the mouth with a buccal opening of 15 mm measured between the incisors. The dental examination and of cranial nerves examination was without special features. The inspection showed a deviation of the chin on the left side. Palpation showed the presence of a painless and immobile bone block at the right temporomandibular joint**.** The cranian scan revealed the presence of a bony block at the right temporo mandibular joint with almost complete disappearance of the joint space (Figure-1).

The therapeutic decision was to perform a resection of the block of ankylosis associated with bilateral coronoidectomy. The resection was compensated by the placement of a temporal fascia. The histological study of the bone block involved a lesion consisting of mature trabecular bone located beneath the cartilaginous cap containing bone marrow. At the interface between cartilage and bone, presence of active enchondral ossification (Figure-2).

It is then an osteochondroma.

DISCUSSION

Ankylosis of the temporomandibular joint is defined as a permanent constriction of the jaws with an oral opening less than 30 mm measured between the incisors secondary to an bone fusion [2]. This ankylosis is responsible for many complications such as slurred speech, chewing, swallowing and lack of oral hygiene. On the etiopathogenic level, ankylosis is almost always secondary of a trauma, infection, and inflammation. several etiologies leading of the destruction and the Disappearance of the articular cartilages, thus putting Contact the two bony surfaces [3]. The young subject is the most affected.

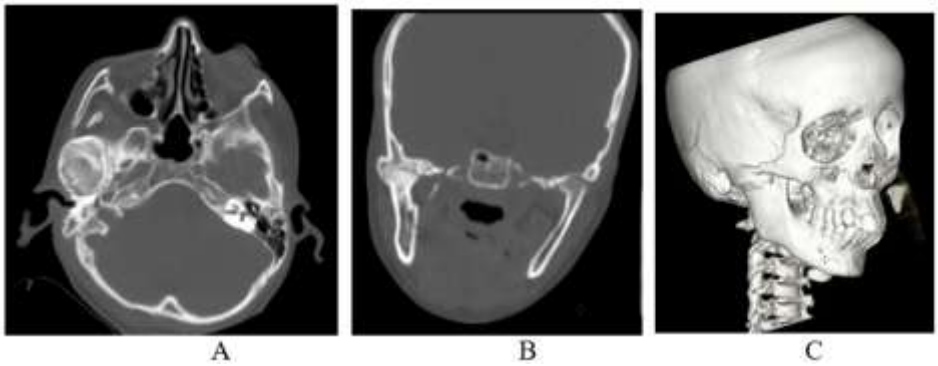

Fig-1: Cranial scan in axial section (A), coronal (B) and 3D reconstruction (C) showing the block of bony ankylosis of the right temporomandibular joint

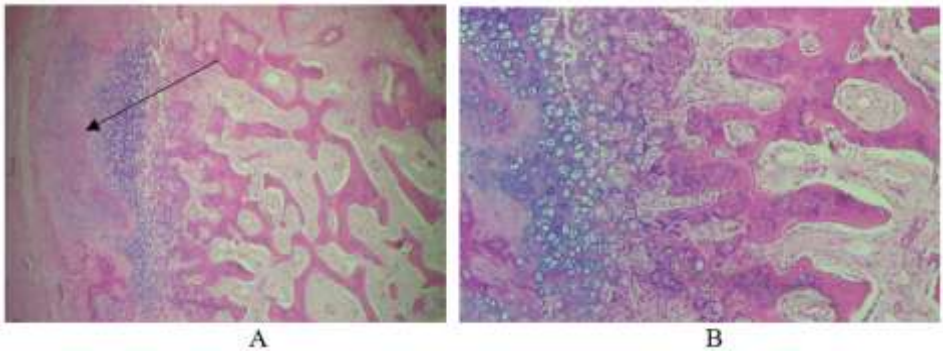

Fig-2: Microscopic appearance of osteochondroma. A: Cartilaginous cap (black arrows) with an enchondral ossification (H&E x100); B: Chondrocytes are regular without atypia (H&E x200)

The ankylosis is then mostly of intra-articular origin follows the condylar and sub-condylar fractures [1]. However, it can also be juxta-articular, with in particular a hypertrophic bone call developed laterally in relation to the temporomandibular joint, and merged with the zygomatic arch, without any specific lesion of the joint [3]. The symptomatology of temporomandibular ankyloses generally limited to the limitation of the opening oral. In fact, there is very rarely pain associated. The questioning will seek of facial trauma with fracture in the region condylian, or an infectious antecedent that may explain ankylosis. It will also be necessary to assess the Function of ankylosis on diet, phonation, as well as on oral hygiene. Caries and malpositions are almost systematic and may be the reason for consultation. The neurological examination focuses on the facial nerve.

The imagery will essentially include a dental panoramic and a scanner. The dental panoramic is the basic examen. It will make it possible to visualize the deformations of the articular surfaces and a possible bone block of ankylosis.It also makes it possible to specify the effect on the teeth [1]. The scanner is necessary for the preoperative assessment. It makes it possible to better characterize the block of ankylosis, and its extension in the 3 planes of space. It also allows to study articulation, the transverse root of the zygoma and the often close relations between the medial part of the block of ankylosis and the internal maxillary artery especially in the post-traumatic etiologies [4]. In general, temporomandibular ankylosis is a radiological diagnosis. Once the diagnosis is made, it is necessary to operate the patient. With the sole imperative of having a child sufficiently mature and motivated to adhere to its post-operative rehabilitation. The treatment is always surgical consisting of a resection of the block of ankylosis, associated with bilateral coronoidectomy. The resection of block may be compensated by the interposition of a fascia, flap temporal, a chondro-costal graft or a prosthesis of the temporomandibular joint depending on the size of the bone block.

Post-operative rehabilitation is essential, early, intense and prolonged. Poor rehabilitation is the main cause of recidivism.

Our patient has an unusual or exceptional cause of temporomandibular ankylosis: osteochondroma. It is a benign tumor that is localized in epiphysis of the long bones, especially the femur and the humerus or the activity of bone growth is important. Localization at flat bones is possible [5]. Its localization in the temporomandibular joint is exceptional and has never been described. Diagnosis of osteochondroma is easy, since standard radiological imaging data are sufficient to confirm the diagnosis. Nevertheless, in rare cases, because of the localization, the volume or the atypical radiological aspect of the tumor, the use of

computed tomography, or even a biopsy, proves necessary [5].

The particularity of our patient is the atypical localization of the osteochondroma on the one hand but also the cause of its unusual and unexpected temporomandibular ankylosis. This atypical location of osteochondroma is never described in the literature.

A resection of the bone block compensated by the interposition of a flap of temporal fascia was performed. It is the anatomopathological study of the resection piece that revealed the osteochondroma. The evolution was good without postoperative complications or early recurrence.

CONCLUSION

Temporomandibular ankylosis is most commonly congenital or post-traumatic. Exceptionally may be of tumor origin. The case reported here is of a patient aged 16 years who presents a temporomendibular ankylosis secondary to an osteochondroma. The diagnosis was made by the histological study of the bone block. A resection of the bone block compensated by the interposition of a flap of temporal fascia was performed. The evolution was good without post-operative complication or early recurrence.

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