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CONDYLAR HYPERPLASIA ASSOCIATED WITH TEMPOROMANDIBULAR DYSFUNCTION: CASE REPORT

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INTRODUCTION

Condylar hyperplasia (CH) is a rare pathology characterized by excessive, progressive and pathological bone growth of one or both mandibular condyles, often resulting in facial asymmetry. It is self-limiting and its active growth can cease at any time (Pravallika et al., 2023). HC seems to occur predominantly in women due to hormonal factors, mainly oestrogen. This hormone regulates bone growth and is found in articular cartilage and growth plates (Shetty, Guddadararangiah, 2021).

This type of pathology, which adversely affects the size and morphology of the mandible, can alter occlusion and indirectly affect the maxilla, generating or aggravating dentofacial deformities such as mandibular prognathism, widening of the condyle, neck, ramus and body of the mandible, facial asymmetry, malocclusion and pain (Rodrigues, Castro, 2015). On the other hand, Bono & Learreta (2022) stated that there is usually no pain in the affected joint, but there may be associated noises and deviation in a contralateral direction when opening the mouth. The occlusal factors that help to confirm the presence of CH are midline deviation, posterior crossbite and unilateral posterior open bite.

Many theories to elucidate the causes of CH have been put forward, however, the etiology of the disorder remains obscure and is probably multifactorial. Some authors support the "local circulation" theory, which states that the abnormal growth of the condyle is caused by an increase in the number of capillaries in the posterosuperior region of the condyles. Others, however, suggest previous trauma, inflammation, infection of the temporomandibular joint (TMJ), middle ear, osteomyelitis, osteochondromas or chondromas. Hereditary, hormonal or genetic influence and TMJ overload are also possible factors mentioned in the literature (Ghawsi et al., 2016). Insulin-like growth factor 1 (IGF-1) has also been associated with the development of condylar hyperplasia. High concentrations of IGF-1 have been found in the proliferation zone of hyperplastic condyles, but this is inconclusive, and the factors underlying the process remain unclear (Pravallika et al., 2023).

Temporomandibular disorders (TMDs) represent a set of conditions that affect the temporomandibular joint (TMJ), muscles of mastication and associated structures. Some signs and symptoms present in TMD are joint pain, myofascial pain or pain in the muscles of mastication, noise and abnormal jaw movements (Zhang et al., 2016), which may also be present in patients with condylar hyperplasia associated with TMD. The DC/TMD (Diagnostic Criteria for Temporomandibular Disorders) clinical assessment instrument - Axis I provides a standardized and operationalized way to examine the temporomandibular joint and its associated structures physically (Durham et al., 2015). Intraoral plates are one of the possible tools for treating temporomandibular disorders, and are considered a temporary treatment option for those patients who present with pain and reduced opening (Bono, Learreta, 2022).

High condylectomy (HCC) is the most common option described for the treatment of CH, however, there is not enough evidence to suggest that an HCC considerably reduces the risk of having to perform additional surgeries (Bono, Learreta, 2022). Treatment of HC should aim to restore normal function and establish a balance in the facial profile. To do this, it is necessary to establish whether the disease is active or not, and a multidisciplinary approach is recommended to provide patients with quality care (Higginson et al., 2018).

Due to the scarcity of studies on the presence of temporomandibular dysfunction in patients with condylar hyperplasia, especially in relation to conservative treatments aimed at restoring masticatory function and pain control, this topic was chosen for the development of this report.

CLINICAL CASE

A 42-year-old female patient (Figure 1) presented at the temporomandibular dysfunction and orofacial pain clinic at the São Leopoldo Mandic School in Campinas, complaining of moderate to severe pain in the parotid masseteric region and in the temporomandibular joint, both on the right side, and in the temporal muscle bilaterally, increasing in intensity during chewing, as well as limited mouth opening (Figure 2).

A Nuclear Magnetic Resonance (NMR) image showed condylar hyperplasia in the right TMJ. Physiotherapy and pharmacotherapy had already been carried out, both without success. Despite the patient's facial asymmetry, she had no aesthetic complaints, only pain and limited opening.

After signing the Informed Consent Form (ICF), the patient underwent a clinical examination using the DC/TMD - Axis I, and the diagnosis of local myalgia, right arthralgia and headache attributed to TMD was confirmed. A Computed Tomography (CT) image (Figure 3) was requested, which confirmed the HC in the right TMJ.

Figure 1: Front photo and initial opening.

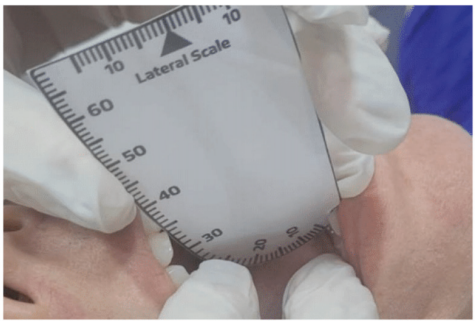

Figure 2: Record of the initial 34 mm opening.

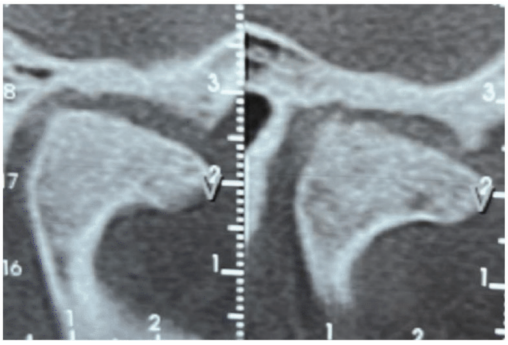

Figure 3: CT scan of condylar hyperplasia

The patient was advised of the presence of temporomandibular dysfunction and CH in the right TMJ and was made aware of all the treatment possibilities, opting at that time to treat the TMD in order to eliminate her main complaints. The treatment included self-care measures such as advice on oral behavior, cryotherapy on the right TMJ, ultrasound to control local myalgia and muscle relaxation (Figure 4), a stabilizer plate to reduce joint overload (Figure 5) and therapeutic muscle stretching exercises to recover mouth opening. The patient responded favorably with pain control and recovery of mouth opening to 40 mm, within normal parameters (Figure 6).

Figure 4: Ultrasound (Quark ®)

Figure 5: Stabilizer plate

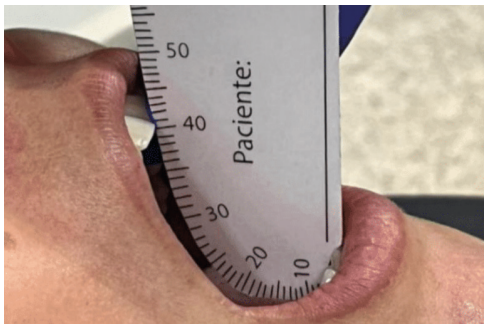

Figure 6: Final mouth opening (40 mm)

FINAL CONSIDERATIONS

Condylar hyperplasia is a rare pathology characterized by excessive, progressive and pathological bone growth of one or both condyles, resulting in facial asymmetry and may be associated with temporomandibular dysfunction. With the confirmation of the diagnoses of local myalgia, right arthralgia and headache attributed to TMD according to the DC/TMD - Axis I and considering the ineffectiveness of previous pharmacological and physiotherapeutic therapies, this patient was given self-care therapies, cryotherapy, ultrasound, a stabilizing plate and therapeutic exercises to control temporomandibular dysfunction. The conservative treatment proposed resulted in a satisfactory evolution in pain control and complete recovery of mouth opening.

Thus, this case demonstrates that establishing a correct diagnosis and applying conservative approaches to the treatment of TMD in a patient with condylar hyperplasia can be an effective way of controlling temporomandibular dysfunction.

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