

Case Resolution

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Pain in the Temporomandibular Region

ABSTRACT

Idiopathic calcified nodules originate from the accumulation of mineralized material within a thrombus due to vascular stagnation. They are rare in the maxillofacial region. These calcifications can go unnoticed for a long time unless their growth alters the facial appearance. They are typically evident in radiographic findings as rounded radiopaque bodies. In most cases, the recommended course of action is monitoring in the absence of symptoms.

Keywords: Phleboliths; vascular anomaly; calcifications; radiopaque.

Level of Evidence: IV

Dolor en la región temporomandibular

RESUMEN

Se presenta el caso de una mujer de 54 años de edad que acudió a la consulta por dolor en la articulación temporomandibular izquierda. Luego del examen clínico, se solicitaron estudios por imágenes y, en las radiografías, se observaron calcificaciones nodulares en la región interna de la rama mandibular izquierda. Se decidió indicar otros estudios por imágenes.

Palabras clave: Flebolito; anomalía vascular; calcificaciones; radiopaco.

Nivel de Evidencia: IV

DIAGNOSIS: Phleboliths.

DISCUSSION

To determine the exact location of the lesions and establish a diagnosis, a CT scan of the craniofacial region with 3D reconstruction was requested. The images revealed nodular calcifications medial to the left mandibular ramus, in relation to the medial pterygoid muscle ([Figures 3 and 4](#)).

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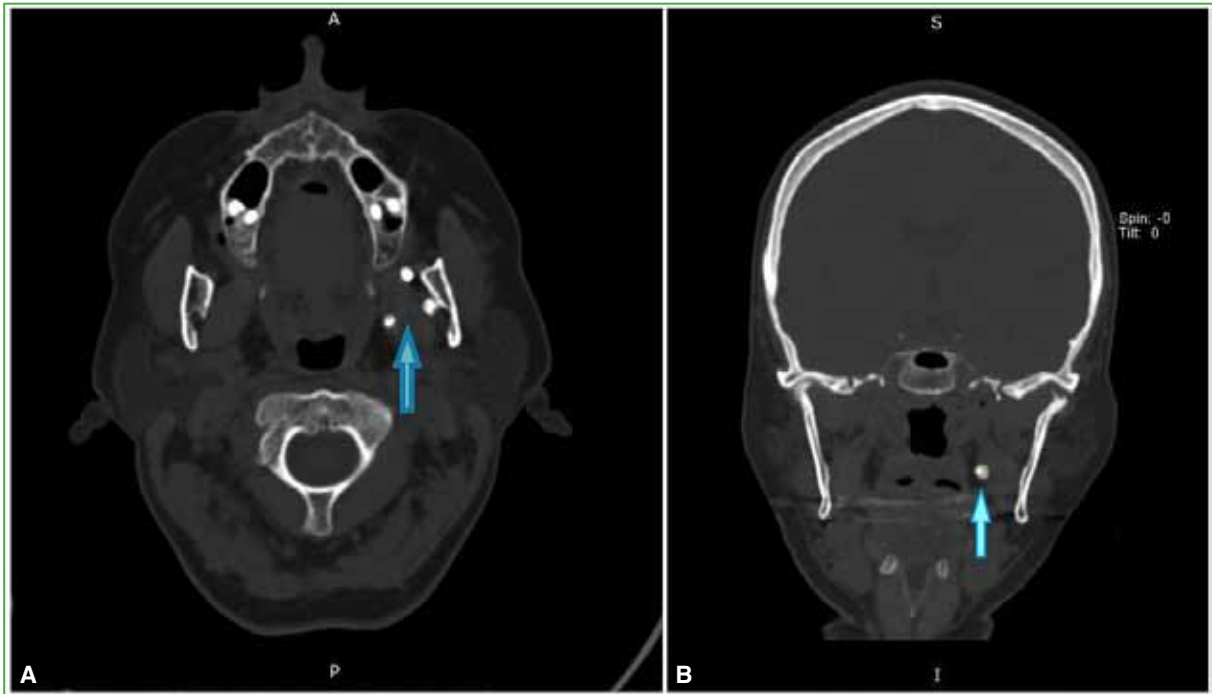


Figure 3. Computed tomography of the craniofacial region. **A.** Axial reconstruction. **B.** Coronal reconstruction.

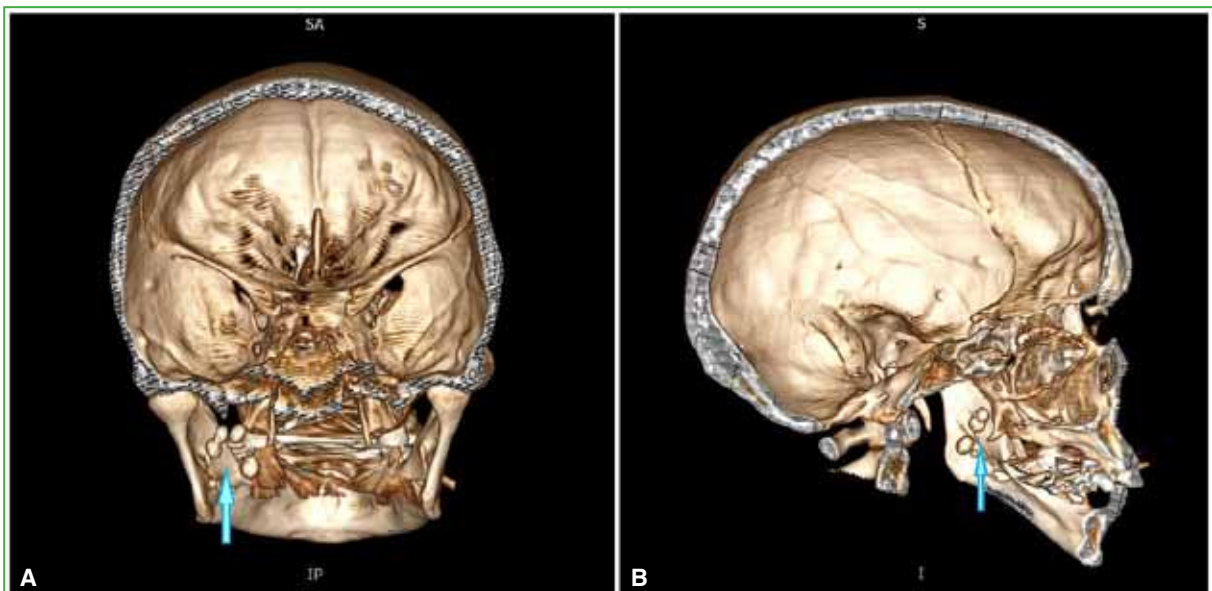


Figure 4. Computed tomography of the craniofacial region. **A.** Volumetric reconstruction, posterior view. **B.** Volumetric reconstruction, sagittal view.

Phleboliths are uncommon idiopathic calcified nodules in the maxillofacial region, characterized by oval or circular concentric radiolucent calcifications.¹⁻³ They result from the accumulation of mineralized material inside a thrombus due to vascular stagnation and are associated with vascular anomalies, hemangiomas, and trauma.^{1,4} This condition is not linked to hereditary factors.⁴

A hallmark feature of phleboliths is their high degree of calcification. Structurally, they resemble a calcified mass of rounded or oval shape, often exhibiting a lamellar arrangement. The growth of a phlebolith occurs from the inside outward and is influenced by fibroblasts.³

The incidence of phleboliths in the head and neck region ranges from 5% to 20%, with an average of 13.5%.^{3,4} These lesions are characterized by slow growth, are typically asymptomatic, and are often associated with the masticatory muscles and cheeks. Occurrence in the salivary glands is rare, though published cases have reported depressible masses accompanied by edema and even symptoms. Calcification can occur at any age, but it predominantly affects individuals during the first and third decades of life, with no predilection for race or sex.^{5,6}

Phleboliths may remain undetected for extended periods unless their growth affects facial aesthetics. They are evident on radiographic findings as rounded radiopaque bodies. Larger phleboliths often exhibit multiple randomly distributed, circular laminations, with a radiopaque halo on the contour and a radiolucent center.⁷

Histological examination of phleboliths reveals concentric calcifications with a lamellar pattern resembling an onion, located within a vessel and sometimes likened to a bull's eye. The outer layer comprises smooth fibrous connective tissue, while the inner layer is shiny brown and elastic. This inner tissue is filled with laminated red blood cells that form an organized thrombus. At the center of the lesion lies a small body resembling an embedded stone, as the calcification grows incrementally.¹

Diagnostic imaging studies include ultrasound and advanced imaging techniques, such as contrast-enhanced computed tomography (CT) and magnetic resonance imaging (MRI).⁸ Differential diagnoses for phleboliths in the maxillofacial region include sialoliths, tonsilloliths, calcified lymph nodes, atherosclerotic plaques in the carotid artery, healed acne lesions, cysticercosis, and miliary osteoma cutis.^{1,8}

In most cases of vascular anomalies, follow-up is the preferred approach due to the absence of symptoms. When phleboliths reach significant dimensions, sclerotherapy or surgical excision may be considered as treatment options.⁸

The patient in this case completed treatment for temporomandibular joint (TMJ) dysfunction, and the symptoms prompting consultation resolved. A watchful waiting approach was chosen regarding the phleboliths.

CONCLUSIONS

Phleboliths are calcified nodules associated with uncommon vascular anomalies in the maxillofacial region. These calcifications often go unnoticed due to the lack of symptoms, making follow-up the most appropriate course of action in many cases.

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