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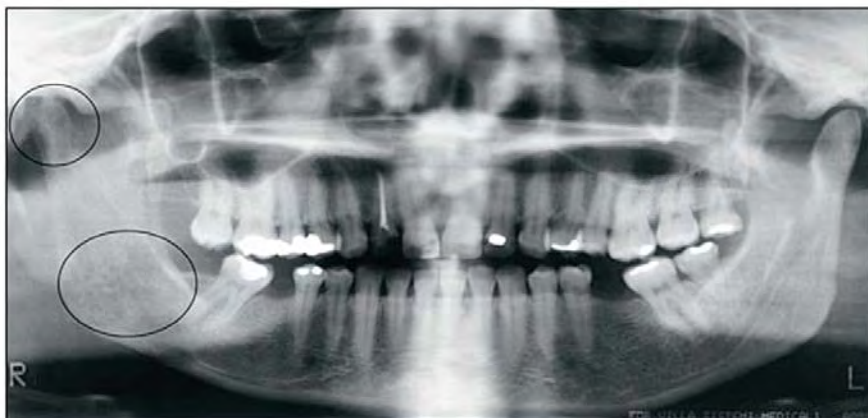
內文：

**Introduction** : Metastases to the oral region are relatively uncommon comprising only 1%-3% of all malignant oral neoplasms. Almost all types of malignancy can metastasize to the mouth. Several authors report **breast adenocarcinoma is the most common malignancy that metastasizes to the oral cavity**, and it is more frequent for a disseminated tumor to involve **the mandible rather than the maxilla**, with **the molar area** being the most frequent involved site. Breast cancer seems to have a particular proclivity for metastasizing to the mandible, as it does so **three times** as frequently as do other malignant tumors.

When present, metastatic lesions provide a diagnostic challenge and the establishment of an exact diagnosis is often difficult because of the atypical clinical and radiographic appearances that can mimic common inflammatory-infectious and posttraumatic conditions of the mouth and jaws. Although this may occur infrequently, it is important that it should be recognized by clinicians. This report presents a case of a patient with a metastatic tumor of the mandible diagnosed with a panoramic radiograph that originated from a breast adenocarcinoma. The role of the dental practitioner in the diagnostic phases is also discussed.

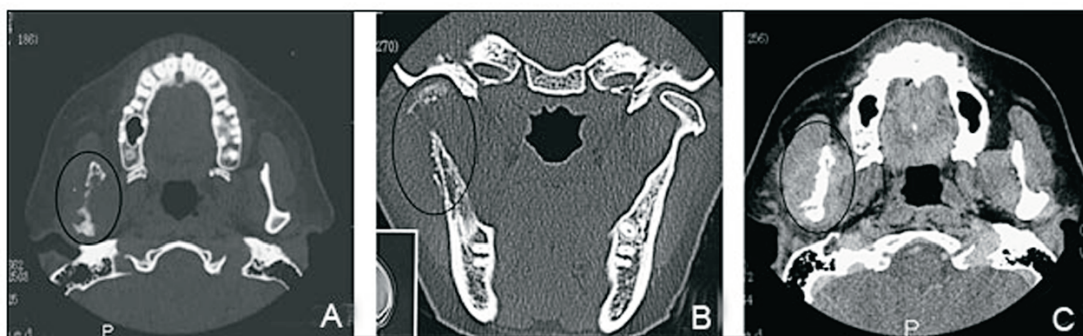
**Case Report** : A **42-year-old female** presented to the Faculty of Dentistry at Fortaleza University (Unifor) in Fortaleza, Ceará, Brazil for what appeared clinically to be temporomandibular disorder(TMD). She reported **swelling and pain over the right temporomandibular joint (TMJ)**. She was previously diagnosed by another clinician as having TMD and received a conventional **occlusal splint** but it had not eliminated nor diminished the TMJ pain. After *months of use*, the patient was referred to the Unifor clinic to treat the TMD.

**Diagnosis** : Swelling and crepitation was observed over the right TMJ region during a clinical examination. Initially the origin of the pain was investigated to establish a diagnosis. A **mandibular deprogramming appliance (JIG)** was used to limit loading on the joint and allow the muscles of mastication to relax. However, the patient reported **an increase in the intensity of pain** which cast doubt on the validity of the previous TMD diagnosis. A panoramic radiograph was taken and an area of radiolucency with a hazy osteolytic-like outline was noted (Figure 1).



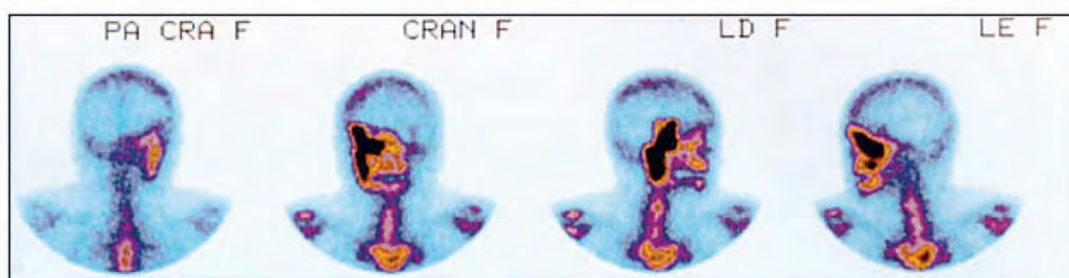
**Figure 1.** Panoramic radiograph showing the osteolytic appearance in the right mandibular ramus in comparison with the left side.

Since such lesions may represent metastatic disease, the patient's past medical history was reviewed. The review revealed a history of a **mastectomy** followed by radiotherapy for the treatment of **breast adenocarcinoma four years earlier**. Computed tomographic (CT) imaging was ordered to better understand the nature and the extent of the lesion. The CT scan demonstrated **an osteolytic lesion with osseous erosion and a spiculated periosteal reaction** that extended from the **vertical ramus to the condyle on the right side**. There was also evidence of a **soft tissue extension with involvement of the masseter and lateral pterygoid muscles**. These findings indicated a strong possibility of a metastatic lesion (Figure 2).



**Figure 2. A.** CT axial view shows the lesion which is destroying the medullar and cortical portions of the right ramus of the mandible. **B.** CT coronal view showing the destruction anterior to the right mandibular condyle. **C.** CT axial view demonstrates a mass involving the right ramus of the mandible extending buccally and lingually to the adjacent soft tissues that involves the masseter and lateral pterygoid muscles.

An **incisional biopsy** was taken to confirm the diagnosis. The histopathology report indicated the connective tissue stroma infiltrated by invasive cancer cells leading to the conclusion of a metastasis of adenocarcinoma of the breast. An additional workup included scintigraphy with Tc99m-MDP that was done to rule out further metastasis. This revealed an increase in uptake in the right mandibular ramus and condyle but showing no other evidence of disease (Figure 3).



**Figure 3.** Scintigraphy demonstrates an increased uptake in the right ramus and condylar region and in the adjacent region of the temporal and sphenoid bone due to the metastatic lesion.

The patient was treated with chemotherapy consisting of Zometa 4mg monthly and Aromasin 25 mg daily along with radiotherapy to the mandible. Imaging control performed with magnetic resonance imaging (MRI) revealed a heterogeneous intermediate signal intensity on T1W1 corresponding to the vertical ramus, coronoid, and condylar process with an extension of the lesion to the greater and lesser wings of the right sphenoid bone. At the one year follow-up, the MRI showed a reduction of the lesion when compared to the previous exam (Figure 4).



**Figure 4. A.** A MRI T1 W revealed an intermediate signal intensity in the vertical ramus, coronoid, and condylar processes with an expansile lesion in the sphenoid bone and the lateral orbital contour. **B.** MRI revealing a stationary lesion.

**Discussion :** A metastatic tumor involving the condyle is extremely rare. These lesions may produce signs and symptoms such as swelling and pain which are difficult to distinguish from those of more common diseases like TMD.

TMD has received much attention in recent years. The clinician who begins the examination with a presumptive diagnosis of TMD often looks only for the signs and symptoms confirming this presumption resulting sometimes in a faulty diagnosis. When diagnosing patients presenting TMD symptoms, a clinician must consider the possibility of unusual causes including **neoplastic disorders, infections, and inflammation**. This is particularly true when the patient **has a history of metastases or primary malignant diseases**.

Metastases to the jaws of primary tumors elsewhere in the body account for only **1%** of all malignant tumors of the oral cavity. Pain of uncertain origin in the jaws should alert clinicians to the potential of metastatic disease in patients with a history of cancer.

This report osteolytic area with an ill defined outline on the right molar region was noted in the panoramic radiograph. This condition may resemble periodontal disease or other benign and malignant conditions affecting the jaws, making the correct radiographic diagnosis difficult. However, because these osteolytic areas on the radiograph were considered along with the previous medical history, metastasis to the jaws had to be included in the differential diagnosis.

**Summary :** In most patients who present with an oral metastasis the distant primary tumor has already been diagnosed and in most cases treated. Sometimes, however, the discovery of an oral metastasis leads to **the detection of an occult primary malignancy** elsewhere in the body. Dentists play an important role in the diagnostic phase that can lead to a useful palliation and an enhanced quality of the patient's life.

**Clinical Significance :** In order to avoid the pitfalls so common in evaluating patients with TMJ pain, **the clinician must perform a complete and critical review of the medical history** along with a comprehensive examination. Failure to do so can result in a misdiagnosis which may lead to unnecessary care, long-term therapy without clinical resolution, or a potentially death.

題號	題目
1	關於TMJ的病變，何者為全關節置換術的適應症？ (A) 可復原的關節盤前移 (B) 不可復原的關節盤前移 (C) 有腫瘤侵犯的TMJ (D) 習慣性TMJ脫臼
答案(C)	出處：95~1 高~臨 2~53
題號	題目
2	對TMJ軟組織最有效的影像診斷技術為： (A) 核子影像 (B) MRI (C) CT (D) Panoramic radiography
答案(B)	出處：93~2檢~臨~1