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內文：

ABSTRACT

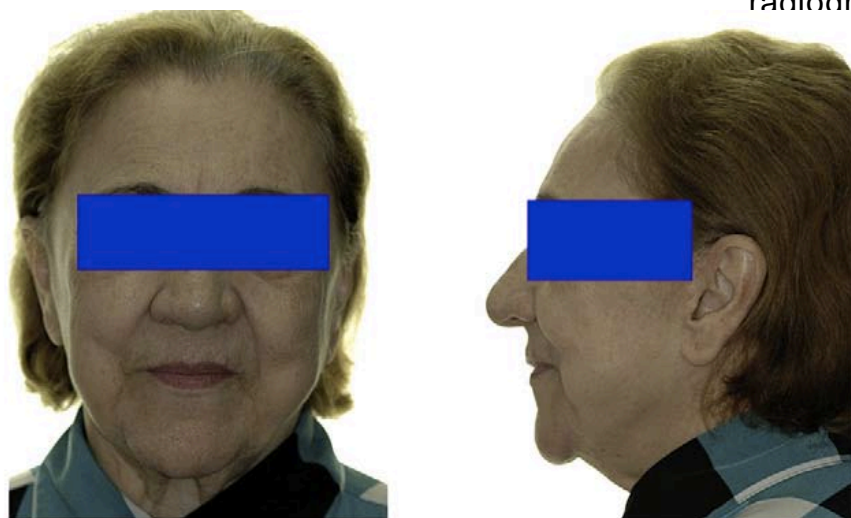
- I. Introduction: Lymphangiomas mimicking apical periodontitis, usually found in soft tissue of children and infants younger than 2 years.
- II. Methods: An **81-year-old woman** was seen in a radiological service to undergo imaging studies for the placement of dental implants.
- III. A **panoramic** radiograph showed a **radiolucent multilocular** structure in the **left mandibular molar region**.
- IV. CBCT scans demonstrated a **well-circumscribed lesion** immediately below the **roots of teeth #17 and #18**.
- V. MRI showed **no involvement of the surrounding soft tissues**.
- VI. Results: Incision biopsy was performed, Microscopically, there was a proliferation of **vascular endothelium covered by long and mature endothelial cells**. In the vessel lumens, there was **eosinophilic material similar to lymph**. The microscopic examination suggested the diagnosis of lymphangioma.
- VII. Conclusions: Pathologies of non-endodontic origin such as lymphangioma, which might be in the area of the tooth apex, should be included in the differential diagnosis of apical periodontitis. Histopathologic examination is mandatory for their diagnosis and treatment.

1. Diagnostic accuracy is essential for treatment success

- 1.1. The definition of a diagnosis involves the establishment of a differential diagnosis .
- 1.2. Which should distinguish diseases of non-endodontic and endodontic origins.
2. Radiolucent images in the mandibular or maxillary area surrounding the root apices might be a sign of **non-endodontic disease** and might lead to a **misdiagnosis** of apical periodontitis.
3. Lymphangiomas are benign, slow growing lesions primarily characterized by the proliferation of lymphatic vessels in a part of the human body, usually the head and neck.
4. It is still controversial whether such a lesion is **neoplastic** or **hamartomatous**. It usually appears at birth or in early childhood, before 2 years of age
5. It is subdivided into 3 basic pathologic categories:
 - 5.1. **lymphangioma simplex**, described as thin-walled lymphatic channels that appear as small, wellcircumscribed cutaneous lesions;
 - 5.2. **cavernous lymphangioma**, described as microscopic thin-walled lymphatic channels with an associated stroma;
 - 5.3. **cystic lymphangioma**, described as large, well-circumscribed, multilocular cystic spaces lined by endothelium containing significant connective tissue components.
6. They usually occur in the neck, skin, or other soft tissues of infants and children. Its clinical course is relatively benign.

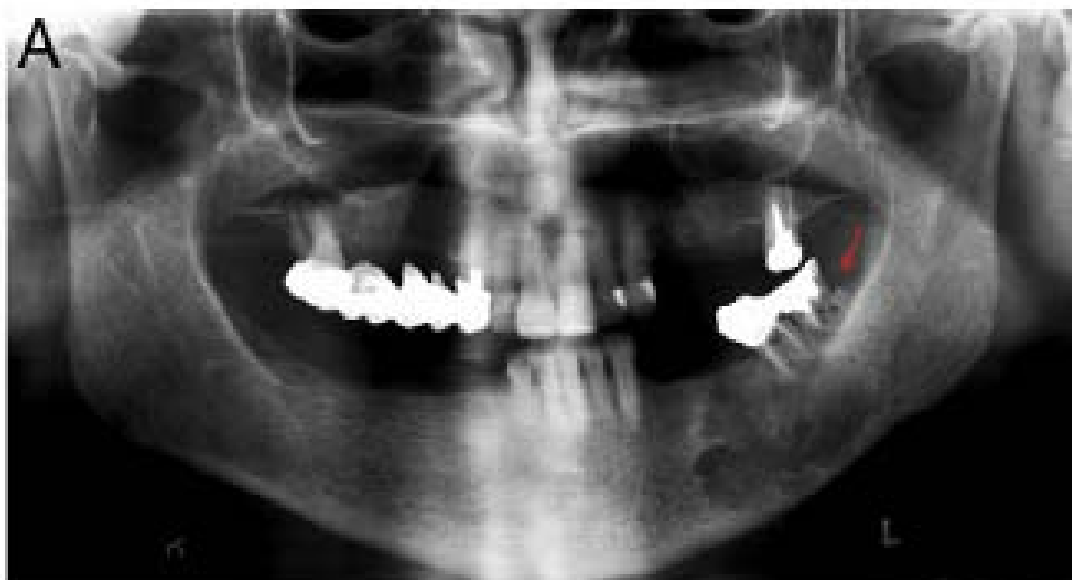
CASE REPORT

- An asymptomatic 81-year-old woman in **July 2008** to undergo radiographic

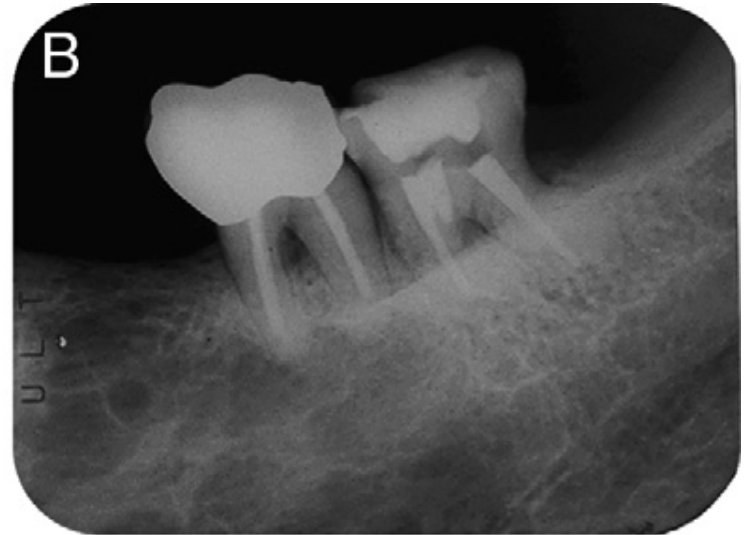
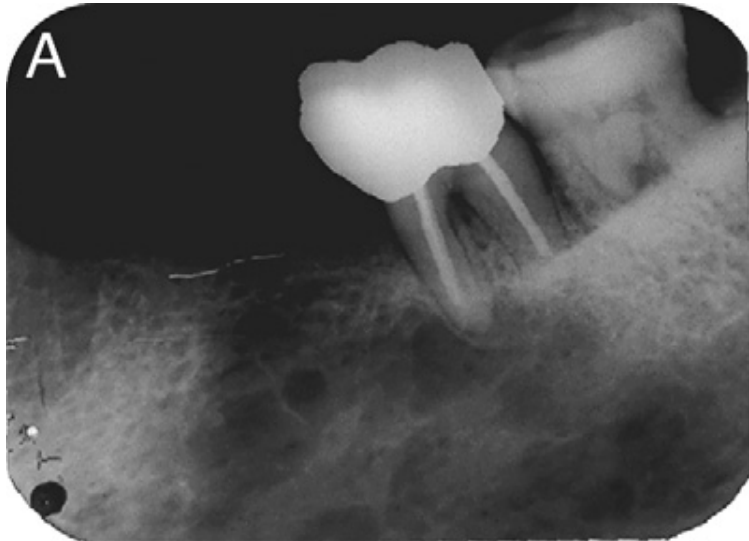


assessment for the placement of dental implants. Intraoral examination showed that the **mucosa was normal**. The panoramic radiograph showed a radiolucent multilocular image in the **left mandibular molar** region, where teeth #17 and #18 had undergone endodontic treatment, and a fracture in tooth #17

- In 2004, tooth **#18** had been treated **endodontically**.
- In 2005, a periapical radiograph was taken after the **endodontic treatment** of tooth **#17**

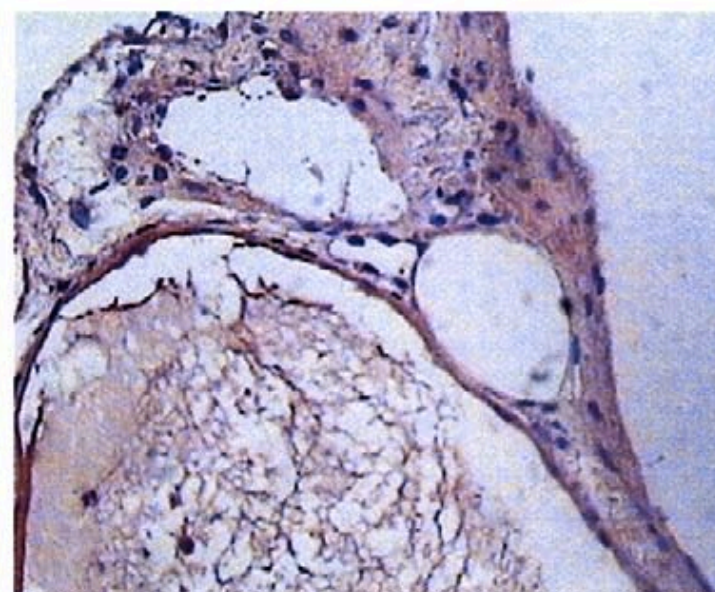
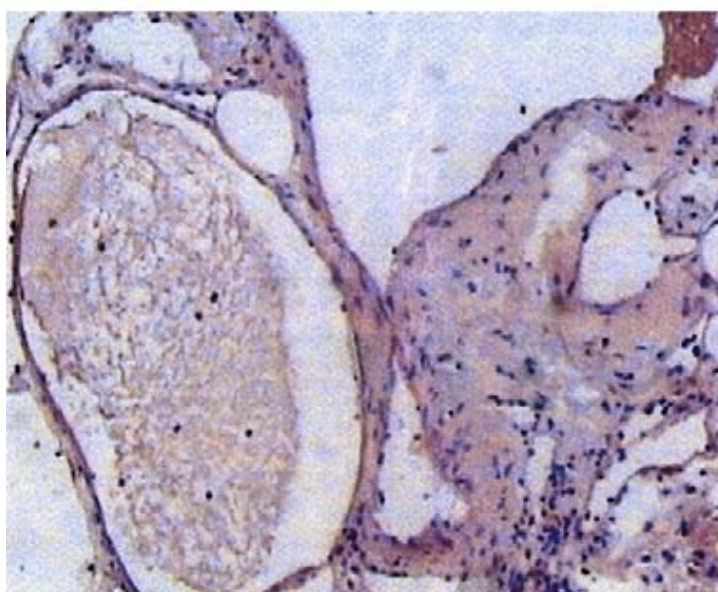
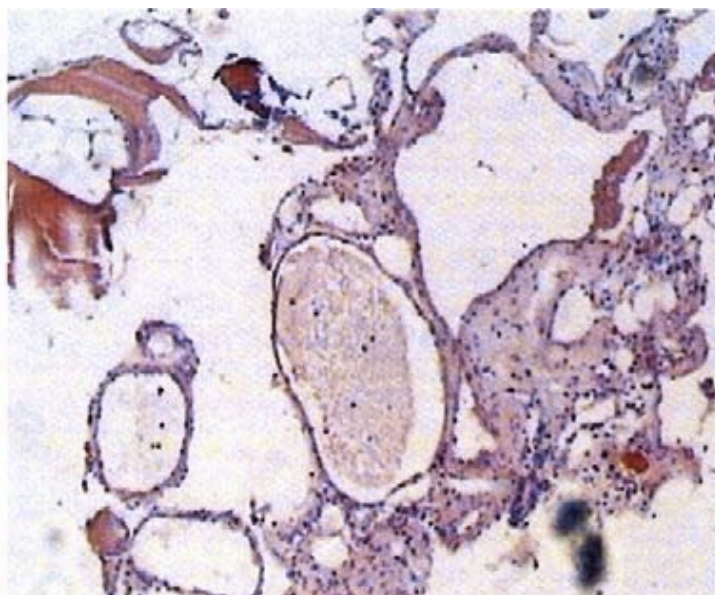
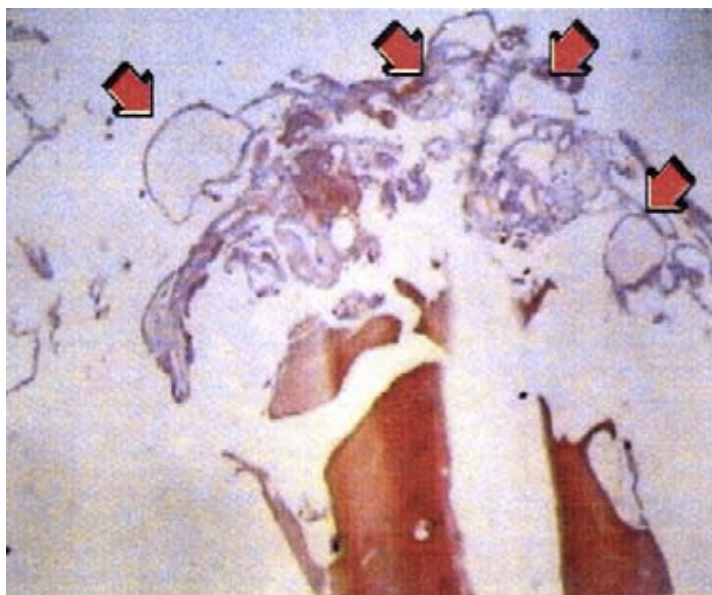


- The periapical radiographs revealed that **the lesion was already there** at the time of the first endodontic treatment in tooth #18.
- The panoramic radiograph requested before the placement of dental implants revealed the lesion's size and location. Cone beam computed tomography (CBCT) and magnetic resonance imaging (MRI) were used to examine the lesion.

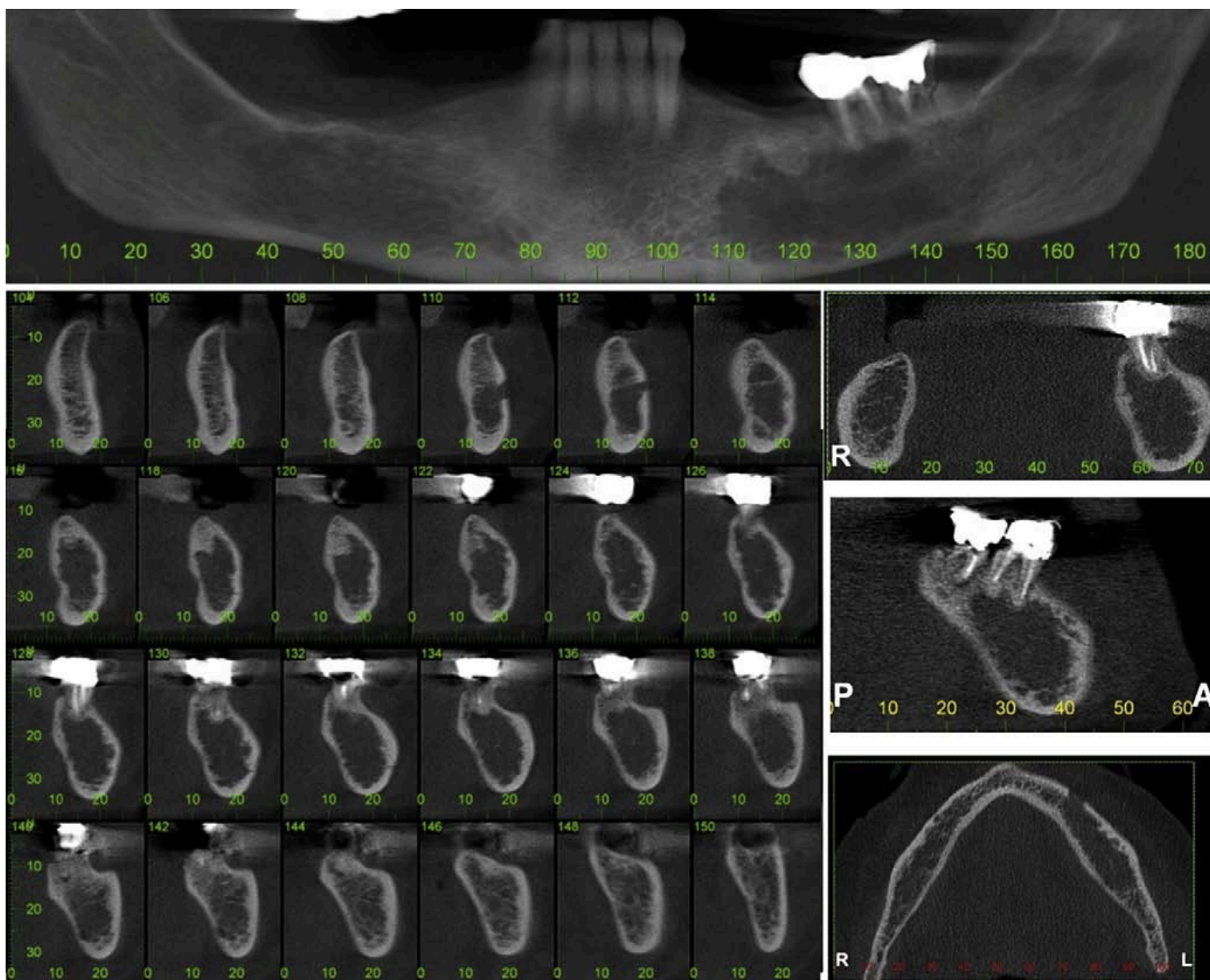


- CBCT scans showed a well-circumscribed lesion immediately below the roots of tooth #18 that extended from below tooth #17 to the mental foramen.
- MRI showed no involvement of the surrounding soft tissues; the lesion had affected only the mandibular bone.
- A considerable hypodense area in the left side of the mandibular body affected the **mental foramen area** and extended **back to the apex of the mesial root of tooth #17**. The **multilocular aspect** was seen only in regions surrounding the mental foramen (sections 108 and 110) and below the apex of the third molar (sections 134 and 136).
- There were remarkable irregular resorptions in the internal buccal and lingual areas, without expansions. A small rupture of the buccal cortex or enlargement of the mental foramen was visible (sections 106 and 108). The images suggested the diagnosis of neoplasia.

- By means of a small incision over the **edentulous region's alveolar ridge (#19)**, and a thin bone layer was removed. Microscopic analysis of the specimen revealed **proliferation of the vascular endothelium covered by long and mature endothelial cells. In the vessel lumina, there was eosinophilic material similar to lymph.** The diagnosis was **lymphangioma**.



- Because of the patient's age and her health condition, the **clinical and radiographic control** of the lesion was recommended and also the **removal of tooth #17**, which presented the root fractured.



- However, because of health issues, the patient came back to the clinic only in January 2010, **18 months later**. Although the surgical removal of tooth #17 was planned, it **did not** occur because the **patient died** in March 2010 of cardiac complications and iliac thrombosis.

DISCUSSION

- The lymphatic vascular system develops during the **sixth week of life** as an **outgrowth of the venous system** within mesenchymal tissues. It plays an important role in **human circulation and organ perfusion homeostasis** and is also relevant for **protection against microorganisms and cells in the body itself**.
- **Lymphangiomas** are thought to result from **congenital errors of lymphatic development** and are classified as **vascular lesions**

composed of **dilated lymphatic channels**. They are lymphatic cysts that became isolated during embryological development and failed to drain into the venous system.

- This disease is sometimes **fatal** or **delayed** into adolescence or early adulthood in patients with a mild form of the disease. However, it is a rare finding in adult patients, especially among the elderly.
- According to some authors, occurrence in adult life is significantly lower than in infancy, and the most common type **in adult life** is **superficial cutaneous lymphangioma (lymphangioma circumscriptum)**.
- They have a particular predilection for the **head, neck, and axilla, sites** that account for nearly **three fourths** of all lymphangiomas. There have also been reports of their **occurrence in various parenchymal organs** such as **lungs, spleen, liver, and bone**.
- **The intraosseous lymphangioma is extremely rare**, and when it affects the periapical area, it can be **easily misdiagnosed** as a periapical lesion. Its progression is usually **slow**, particularly when it affects elderly patients whose cellular activity is lower.
- Patient history, clinical examination, pulp vitality tests, and follow-up of endodontically treated teeth are essential for an **endodontic diagnosis**.
- Many osteolytic lesions have radiographic features that are similar to those seen in cases of intraosseous lymphangiomas, such as cherubism, simple bone cyst, aneurysmal bone cyst... and etc.
- Diseases of non-endodontic origin such as lymphangioma, which might be associated with the tooth apex, **should be included in the differential diagnosis of apical periodontitis**. All resources that aid in the definition of the diagnosis should be used. This case could be **followed up** because of the lesion site and the patient's health condition and age.
- CBCT and MRI are important imaging exams, and histopathologic examination is mandatory to establish a correct diagnosis and treatment.

題號

題目

1	下列何者不是 lymphangioma 的分類之一？ (A) Capillary lymphangioma (B) Cavernous lymphangioma (C) Cystic lymphangioma (D) Channel lymphangioma
答案 (D)	出處：Oral & Maxillofacial PATHOLOGY secon edition P.475
題號	題目
2	Lymphangioma 好發於何處？ (A) Neck & chest (B) Chest & abdomen (C) Abdomen & limbs (D) Head & neck
答案 (D)	出處：Oral & Maxillofacial PATHOLOGY secon edition P.475