This article presents an unusual case of actinomycosis that involved alveolar bone without definite symptoms, which was confused with a retained root tip after incomplete tooth extraction.

II. Case Report

A 58-year-old male patient, who has been medicated for hypertension and diabetes mellitus, was referred from a private dental clinic for extraction of a retained root tip. The patient reported extraction of the lower right third molar about one year prior. He presented for irritation of the lingual gingiva distal to the lower right second molar. However, he did not report any pain or swelling. The need for extraction of a fractured root of the second molar was written in the referral paper even though the patient insisted that the root of the third molar had been left intact after the third molar extraction.

The oral examination revealed root-like material with dentin-like color extruding from the lingual aspect of the extraction site. However, there was no gingival swelling or any sign of inflammation around the lesion. (Fig. 1)

The panoramic radiograph showed root-like material distal to the root of the mandibular right second molar, which was more radiopaque than the surrounding alveolar bone. (Fig. 2, 3)
According to the patient’s history, symptoms, clinical, and radiological examination, the lesion was thought to be a retained root tip of the third molar. Therefore removal of the lesion with biopsy was planned without further examination such as computed tomography or microbial identification.

A biopsy was performed during removal of the lesion. The removed lesion was yellow-colored, root- or bone-like hard material and was sent for pathological examination. The patient was treated with Augmentin 625 mg (amoxicillin/clavulanate) every 8 hours and non-steroidal anti-inflammatory drugs for 5 days. Pathological examination on the day of suture removal revealed the lesion to be actinomycosis based on bone fragment filled with sulfur granules and aggregates of Actinomyces on hematoxylin and eosin staining (Fig. 4).

Therefore, the patient restarted antimicrobial therapy with Augmentin for 2.5 months and was regularly followed-up. (Fig. 5) After 10 months, the patient remained in good health without symptoms, and the radiograph showed bony healing without any sign of infection.

III. Discussion

The present study reported a case of unusual actinomycosis without abscess or fistula, which was confused with a retained root tip.

Actinomycosis, as an opportunistic infection, often affects patients with certain medical conditions such as cancer, immunodeficiency, and malnutrition. Actinomyces are gram-positive anaerobic bacteria that do not cause infection when
The treatment of actinomycosis mimicking a retained root tip

mycosis infections.

In conclusion, actinomycosis is an infection that can be confused with other common pathologic conditions. However, it should be differentiated because of the need for long-term antibiotic therapy. In this case, the patient’s history of tooth extraction and the shape of the lesion were confusing enough to misdiagnose the actinomycosis infection as a retained root tip. The diagnosis resulted in long-term antibiotic therapy rather than simple root tip extraction, which ended with an ideal outcome.

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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