

# LATE PRESENTATION OF ACTINOMYCOSIS AFTER THIRD MOLAR SURGERY

LIAN CHIN BOON

## SUMMARY

*A case of actinomycosis occurring four years after the surgical removal of an impacted lower third molar is presented. The need for careful wound debridement and the use of antibiotics as a prophylactic measure is emphasized.*

## INTRODUCTION

Actinomycosis is a chronic infectious disease characterized by multiple draining sinuses, caused by the anaerobic gram-positive microorganisms, *Actinomyces israelii* and *Actinomyces naeslundii*.<sup>1</sup> Although it is not a rare disease, it is relatively an uncommon infection. There are four clinical forms of actinomycosis encountered in clinical practice, namely the Cervico-facial form, the Thoracic form, the Abdominal form and the Generalized form.

Intraorally, actinomycotic infections have been associated with apical dental cysts, dental granulomas and dental pulps. Bone involvement is relatively uncommon but in recent years, reports of actinomycosis associated with bony sequestra, mandibular bone loss and osteomyelitis have been reported.<sup>2,3</sup>

A case of actinomycosis encountered four years after the surgical removal of a lower impacted third molar is presented.

## CASE REPORT

A surgical removal of an impacted lower left third molar was carried out under local anaesthesia on a healthy 22-year old female dental surgeon in October 1982. Her postoperative recovery was uneventful. She remained symptom-free until March 1986, when she presented with a small painful fluctuant swelling over the operated site, namely the left lower retromolar pad area. Her temperature was 38°C with associated submandibular lymphadenopathy. A course of metronidazole (Flagyl) was prescribed and the pain and swelling subsided.

She reappeared in May 1986 with the same complaint and a dental prophylaxis was carried out. She remained symptom-free until July 1986 when she developed the same problem, that is, pain and swelling over the operated site. This time, an intra-oral radiographic examination revealed a small radiolucent area distal to the lower left second molar. A provisional diagnosis of an early apical cyst was considered.

Under local anaesthesia, the apical cyst was enucleated and the histological findings concurred with the clinical diagnosis of an early apical cyst (Fig. 1). However, several colonies of actinomyces were also present (Fig. 2). She was treated for an actinomycotic infection using long term antibiotic therapy in combination with metronidazole. (Flagyl).

## DISCUSSION

Holst & Lund (1979)<sup>1</sup> found that eight of their 25 cases of actinomycosis under review developed this condition as a result of post-operative infec-

---

LIAN CHIN BOON, BDS, FDSRCPS, FADI, AM  
Lecturer,  
Department of Oral Surgery,  
Faculty of Dentistry,  
University of Malaya,  
59100 Kuala Lumpur.

---

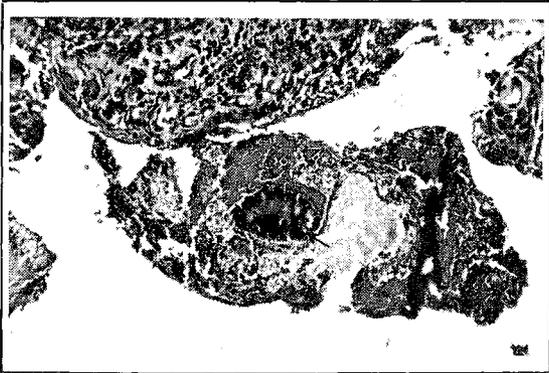


Fig. 1 Haematoxylin and eosin x 135 — showing cyst wall and actinomycotic colony



Fig. 2 Haematoxylin and eosin x 135 — showing colonies of actinomyces

tion. However, there was a period of six to eight weeks to about 12 months before actinomycosis was apparent. In the above case, although no organism was cultured (because culture of the

Actinomyces is difficult) after the enucleation of the dental cyst, it does not exclude the possibility that actinomyces was already in the wound and playing a pathogenic role.

The diagnosis of actinomycosis developing as a result of post operative infection in this case is based on the fact that colonies of actinomyces were found in the histological sections coupled with the fact that signs and symptoms of a chronic infection were seen as exemplified by the three flare-ups. In addition, only prolonged antibiotic therapy in combination with metronidazole (Flagyl) was able to clear the infection.

In conclusion, we must bear in mind that actinomycosis can lure the surgeon into believing that he has "cured" the disease. This case illustrates the importance of careful wound debridement with the appropriate antibiotics as a prophylactic measure to prevent actinomycosis.

## REFERENCES

- <sup>1</sup> Holst E., Lund P. Cervico-facial actinomycosis. A retrospective study. *Int. J. Oral Surg.* 1979; 8: 194 — 198.
- <sup>2</sup> Stenhouse D. Intraoral actinomycoses. *Oral Surg.* 1975; 39: 547 — 552.
- <sup>3</sup> Williams F.B. Cervico-facial actinomycosis in the presence of mandibular bone-loss. *Br. Dent. Journal.* 1976; 140: 145—146.