**CASE REPORT**

**Actinomyces Infection of the Mastoid: A Rare Entity**

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**Summary**

A rare case of mastoid infection caused by actinomyces israelii is presented. This patient underwent exploratory mastoidectomy followed by long term oral pencillin. She responded well to the treatment and has been asymptomatic on follow up todate.

**Key Words:** Actinomyces infection, Mastoid

**Introduction**

Infection of middle ear and mastoid by actinomyces is uncommon1.2.3.4. There has only been less than 30 cases previously reported in English literature5 and none from Malaysia. This article highlights one such case which has been treated successfully by combination of surgery and long term pencillin.

**Case report**

Nineteen year old girl presented with a two month history of left ear discharge and hearing loss. Clinical examination revealed an aural polyp and conductive hearing loss on the affected ear. Examination under anesthesia and excision of polyp was performed. Intra-operatively she was found to be having bony defect at posterior canal wall with an intact drum. There was whitish grey material behind the polyp which was sucked out. Histopathology report shows inflamed granulation tissue and necrotic tissue which is suggestive of actinomyces (Figure 1). CT scan did not reveal any intra cranial extension. Subsequently, mastoid exploration was performed under general anesthesia. Intra-operatively the large mastoid cavity was found to be filled with pus and whitish grey material. A myringotomy was performed for the middle ear effusion. Long term oral pencillin therapy was commenced for six weeks. At 2 months follow up post surgery the ear was dry and the patient was asymptomatic.

**Discussion**

Actinomycosis is an anaerobic infection caused by actinomycetes, which is part of the normal flora in the oral cavity and intestine6. Antecedent disease or surgery predisposes to infection, and involved tissue...
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becomes indurated and forms multiple draining fistulae discharging characteristic sulfur granules. Actinomycosis of temporal bone is uncommon. While the cervico facial region is the most common site of the disease, involvement of temporal bone is rare. Actinomyces species are rare but treatable causes of CNS infection. The offending organism actinomyces is anaerobic filamentous organism that is difficult to grow in culture. The diagnosis of actinomycosis is usually made at surgery. The infection is chronic and seldom diagnosed prior to tympanomastoidectomy. The identification of small yellow, glue like masses, which are called sulfur granules, is often the key to making the diagnosis of actinomycosis. The differential diagnosis includes malignancy and other chronic infections. Effective treatment consists of surgery and long term administration of penicillin. Surgery is confined to taking a biopsy for histology and to the draining of inflammatory foci.

References