



## Actinomycosis - Left Post Chest Wall

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### Abstract

A forty year old female of weak body built presented with recurring small hard lumps in left posterior chest wall for 3 years and discharging ulcers for 3 months duration. Clinically, the provisional diagnosis was malignancy with secondary infection. FNAC showed features suggestive of dysplasia but histopathology confirmed the diagnosis as actinomycosis. The present case is reported due to rare incidence of actinomycosis at post chest wall with muscle involvement.

### Key words

Actinomycosis, post chest wall, biopsy

### Introduction

Actinomycosis is caused by *Actinomyces israelii*, a bacteria belonging to Actinomycetales. There are three classic patterns of actinomycosis; i) cervico-facial, involving the jaw extending into the neck, ii) thoracic, and iii) abdomino-pelvic. *Actinomyces israelii* is anaerobe, which becomes pathogenic whenever there is devitalization of tissues and reduction of tissue oxygen tension. Thus, actinomycosis of jaw and neck is usually secondary to an intraoral infection, dental surgery, lung abscess and ulceroinflammatory disease of the gut. Antecedent disorder provides a favourable environment for growth of *Actinomyces israelii*.(1)

Here we report a case of actinomycosis of skin at post chest wall with deep muscle involvement, diagnosed clinically and cytologically as suspicious for malignancy but confirmed histopathologically.

### Case Summary

A lean and thin forty year old female presented with a diffuse (10 cm x 10 cm) lump, having multiple ulcers on her posterior chest wall since 3 years. The lump was excised by private practitioner but recurred and

then the patient was referred to JN Medical College. Local examination revealed multiple bleeding ulcers on skin surface with underlying hard mass. Routine examinations of oral, chest, cardiovascular and abdominal cavities revealed no abnormality. Haematological and biochemical parameters were normal except a low haemoglobin percentage (8.5 gm%) and raised erythrocyte sedimentation rate (50 mm in 1st hr.). Mantoux test was negative and chest X-ray was normal. Sonographic study using ionic contrast showed multiple discharging wounds present on left side of post chest wall. CT image showed soft tissue density on left posterior chest wall extending from T4 to L1 vertebrae, involving ipsilateral serratus anterior and L dorsi, Paraspinal, Trapezius, T major and Infraspinatus muscles with thickening and irregularity of overlying skin and with out involvement of mediastinum or bone. Pus smear revealed gram positive, branching beaded, thin filamentous rods. Anaerobic culture on blood agar showed typical molar tooth colonies.(2)

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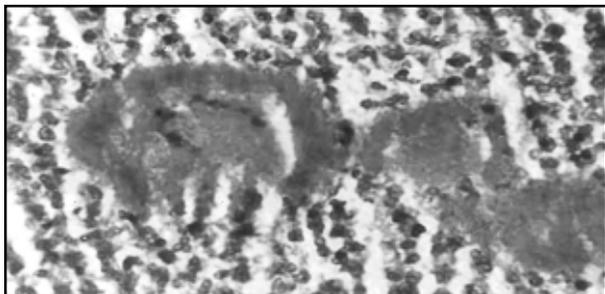


Fig-1- Skin covered tissue sections showed multiple aggregates of actinomycotic granules surrounded by multiple microabscesses, within the heavily inflamed and vascularized fibrocollagenous dermis (H & E x 400).

**Pathological Findings**

**Gross:** 3 pieces of soft to firm tissue with microcystic areas, the largest one measuring 5 x 5 x 3 cms and the smallest one 1 x 1 x 1 cms. All having slightly variegated cut appearance with specks of haemorrhage.

**Microscopic:** Skin covered tissue sections showed multiple aggregates of actinomycotic granules surrounded by multiple microabscesses, within the heavily inflamed and vascularized fibrocollagenous dermis (Fig-1). Periodic acid schiff stain showed PAS

positive actinomycotic mycelium.

**Discussion**

The distribution of the disease is mainly tropical and subtropical countries.(3) Actinomycosis involving the cervico-facial, thoracic, abdominal and pelvic (involving female genitalia) sites are common.(4) In the present case actinomycosis involved the posterior chest wall upto deep muscles. There is a possibility that the present case occurred due to primary cutaneous inoculation and colonization by Actinomyces.

**References**

1. Beaman BL, Saubolle MA and Wallace RJ. Actinomycetes of medical importance manual of clinical microbiology. 6th Ed. Washington DC. *Am Society of Microbiology* 1995.
2. Summanen P, Baron ET, Citron DM. Wadsworth anaerobic bacteriology manual. 5th Ed. Belmont California, 1993.
3. McNeil M, Brown JM, Scalise G. The medically important antinomycetes: Epidemiology and microbiology. *Clin Microbiol Rev* 1994: 357-58.
4. Paalman RJ, Dockerty MB, Mussy RD. Actinomycosis of ovaries and fallopian tube. *Am J Obstet Gynaecol.* 1999: 419-31.

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