

Actinomycosis Of Hand And Wrist: A Case Report

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Citation

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Abstract

Actinomycosis is a chronic granulomatous disease characterized by external sinuses through which tiny colonies of organisms called sulphur granules are discharged. We hereby report a case of actinomycosis of wrist and hand – a rare site, in a 33 years old male patient which resisted usual treatment of curettage and penicillin therapy and amputation was required to eradicate the disease.

INTRODUCTION

Actinomycosis is an indolent, slowly progressive infection caused by anaerobic or microaerophilic bacteria primarily of the genus *Actinomyces* that colonize the mouth, colon and vagina. Mucosal disruption leads to infection and small abscesses and pus filled sinus tracts are formed from which pus containing colonies of organisms called sulphur granules are discharged. Actinomycosis has a peak incidence in the middle decade with three-fold higher incidence in males¹. The common sites of infection are cervicofacial, thoracic, abdominal, primary cutaneous and pelvic. Wrist joint with hand is a rare site of involvement and is being reported.

CASE REPORT

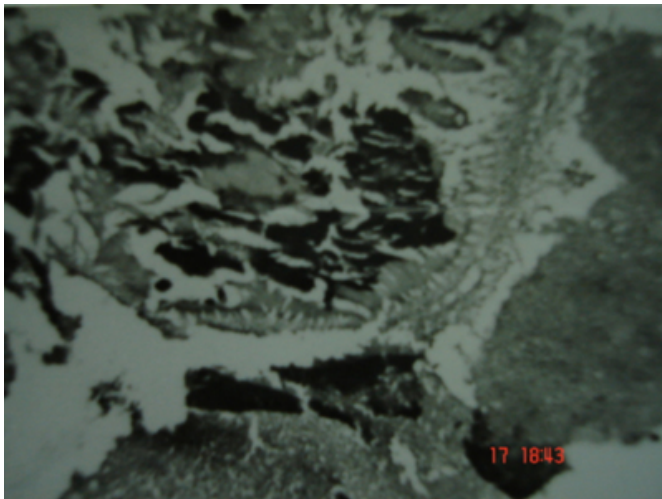
A 33 years old male patient presented with pain, swelling and multiple discharging sinuses at right wrist and hand in carpo-metacarpal area. Examination revealed a stiff, tender and swollen wrist and hand with multiple discharging sinuses which were adherent to underlying musculotendinous tissue and bone and there was marked wasting of forearm muscles (Fig. 1).

Figure 1



Radiograph of hand and wrist revealed multiple lytic areas surrounded by sclerosis in wrist bones and metacarpals (Fig. 2).

Figure 2



Hematological investigations were unremarkable except moderately increased erythrocyte sedimentation rate (ESR) of 50mm first hour. In the past he had taken ATT for seven months empirically in view of tuberculosis being endemic in this area. However, no confirmatory diagnosis of tuberculosis was made. There was no improvement with antitubercular drugs. The curettage and biopsy from discharging sinuses revealed large amount of inflammatory granulation tissue with a dense acute inflammatory exudates surrounding granules possessing a basophilic centre with radiating eosinophilic fringe (Fig. 3).

Figure 3



Gram staining showed colonies of actinomyces confirming the diagnosis of actinomyces. After confirmation of diagnosis, two attempts of curettage of discharging sinuses at an interval of three months with high doses of penicillin (20 million units intravenous per day) for 3 weeks were made. With this therapy he had mild relief for few weeks but

ultimately he developed tender, stiff and almost non-functional painful hand for which an above wrist amputation had to be performed for complete eradication of the disease. At a follow up of five-years the patient is disease free, well rehabilitated and he is using a cosmetic hand.

DISCUSSION

Actinomyces involving the extremities is although rare but has been reported in literature. Bose et al treated synovial actinomyces of knee in a 32 year old woman with penicillin.² Kumar et al reported actinomyces of knee which was mimicking neoplasm but on surgical removal histopathological examination confirmed the diagnosis.³ Vandavelde et al have also reported actinomyces of lower leg in a young man for which below knee amputation was done.⁴ Earlier, we have also reported a case of actinomyces of knee for which above knee amputation was performed.⁵ Only few cases from an infection in hand have been reported in the literature.^{6,7}

Actinomyces has been called “the most misdiagnosed disease” and its entity remained a diagnostic challenge even to most experienced clinicians. Its chronic and indolent course resembles that of fungal infection, tuberculosis and malignancy and delays early diagnosis as happened in our case.

The present patient had a glass prick injury while working in the fields. After few weeks he developed swelling in wrist and metacarpal area. Tuberculosis being an endemic disease in this part, he was also treated with antitubercular drugs and ultimately developed multiple discharging sinuses with super-added infection. The long standing infection with fibrosis of soft tissue and sclerosis of bone, hampered the penetration of penicillin. Even with multiple attempts of curettage the infection could not be eradicated completely. The hand became painful and non-functional, hence amputation through lower one-third of forearm had to be performed.

From this case we conclude that one should be very vigilant when such infections are seen in patients like farmers who are more prone for vegetative penetrating injury. An awareness of the full spectrum of the disease will expedite its early diagnosis and treatment and will minimize the unnecessary surgical interventions, morbidity and mortality.

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