PRIMARY CUTANEOUS ACTINOMYCOSIS

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INTRODUCTION

Actinomycosis is a chronic, suppurative and granulomatous disease caused by Actinomyces species. It results in the formation of draining sinuses through which sulphur granules are discharged [1]. The five clinical variants of Actinomycosis include cervicofacial (60%), thoracic (20%), abdominal (15%), primary cutaneous and pelvic [2-4]. The primary cutaneous type results from implantation [4]. We report a case of primary cutaneous Actinomycosis who acquired the infection probably as a result of using syringes infected with Actinomyces sp.

CASE REPORT

A 45-year-old male; resident of district Bannu of the North-Western Frontier Province of Pakistan, presented with the complaints of multiple sinus formation with scarring and purulent discharge over both shoulders for the last eight years.

According to the patient eight years earlier, he developed a febrile illness. He underwent treatment for this at a clinic in his village run by a dispenser. He received intra-muscular injections into both deltoid muscles on multiple occasions. Approximately four months after this treatment, he started developing these discharging lesions at the sites of injections. There was no history of cough, haemoptysis, weight loss, constitutional symptoms or any other trauma to the site.

On dermatological examination, the right shoulder revealed a large atrophic plaque, 19 x 12 cm in size with puckered scars while the left shoulder revealed a 26 x 14 cm atrophic plaque with two discharging sinuses. The sinuses were composed of exuberant granulation tissue and discharged yellowish pus (fig.1).The regional lymph nodes were not enlarged. Systemic examination revealed no abnormality.

On investigation, blood counts, chemistry and radiological examination of the chest, jaw and underlying bones were normal. Examination of the pus by direct microscopy revealed sulphur granules. A KOH mount was prepared which was negative for fungal hyphae. A skin biopsy specimen for histopathology revealed epidermal hyperplasia with multiple abscesses in the dermis with sheets of neutrophils. Granular colonies of gram positive staining microorganisms surrounded by chronic inflammatory infiltrate and fibrosis in the mid dermis as well as the classic 'ray fungus' were seen (fig.2). Tissue specimen and pus were incubated on Sabouraud's medium and blood agar but no bacterial or fungal growth was seen.

On the basis of clinical picture, presence of sulphur granules and a consistent histopathological picture, a diagnosis of primary cutaneous actinomycosis was made. It was most likely due to intramuscular injections using contaminated needles.

DISCUSSION

Most pathogenic Actinomycetes are from the saprophytic soil flora. A.israelii, the commonest pathogenic Actinomycete is an anaerobe [2,5]. A higher incidence of disease in rural areas and agricultural workers is presumably because of poor oral hygiene, lack of access to antibiotics and a greater incidence of occupational trauma [6].

The results of cultures (aerobic and anaerobic) are not always positive and a high index of clinical suspicion is required [7,8]. Diagnosis of the condition rests on characteristic histology and the demonstration of sulphur granules in the pus [8]. Typical histology includes small abscesses, pus-filled sinuses, granular colonies with radiating mycelia and a surrounding inflammatory fibrosis [1,5]. In our case, there was a history of appearance of lesions following intra muscular injections and examination of the pus by direct microscopy showed sulphur granules. Histopathology was suggestive of Actinomyces infection revealing multiple abscesses in the dermis with sheets of neutrophils. Granular colonies of gram positive staining microorganisms

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Fig.1

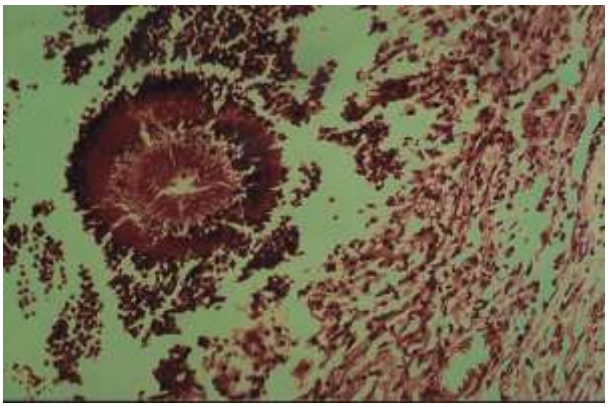
Fig.2

surrounded by chronic inflammatory infiltrate and fibrosis in the mid dermis as well as the classic 'ray fungus' were seen (fig.2).

Our patient suffered from primary cutaneous actinomycosis, an uncommon variant [7,8], probably as a result of implantation from infected syringes. This chronic and debilitating disease could have been prevented by avoiding the unwarranted and excessive use of injections. Patients and health care workers need to be educated to avoid unnecessary injections. If, however, injections are warranted, fresh and sterile disposable syringes of reputed brands only should be employed.

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