Actinomycosis of the Upper Lip

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Actinomycotic infections are known to have an association with difficulties in diagnosis and treatment. These infections usually involve the head, neck, thorax, and abdomen. Actinomycosis of the upper lip is a rare condition and an important one as well, because it can imitate other diseases. As the initial impression, it can easily be mistaken for a mucocele, venous lake, or benign neoplasm. An 82-year-old man presented with an asymptomatic normal skin colored nodule on the upper lip. Histopathologic findings showed an abscess and sulfur granules in the dermis. Gram staining results showed a mesh of branching rods. In this report, we present an unusual case of actinomycosis of the upper lip and discuss its characteristics and therapeutic modalities. (Ann Dermatol 23(S1) S131 ~ S134, 2011)

-Keywords-
Actinomycosis, Sulfur granules

INTRODUCTION

Actinomycosis is a chronic, suppurative infection, caused mainly by Actinomyces israelii, Gram-positive anaerobic bacilli of which cultivation is difficult. In humans, it lives as a commensal organism in the oral cavity and respiratory and digestive tracts. The organism is unable to penetrate intact tissue; therefore, infection is often secondary to local injury or spreading from visceral sites. This infection is characterized by localized swelling with suppuration, abscess formation, tissue fibrosis, and sinus drainage. Oral actinomycosis is rare, compared with occurrence at common sites, which include the cervicofacial, respiratory tract, and gastrointestinal tract. Clinical features of our patient were similar with a mucocele or venous lake; however, the biopsy specimen revealed an abscess and sulfur granules in the dermis. Therefore, we made a diagnosis and report an unusual case of actinomycosis of the upper lip.

CASE REPORT

An 82-year-old man presented to our dermatology department with a subcutaneous nodule on the mucosal aspect of his right upper lip. He noticed the lesion 15 days before the visit and had not taken any treatment for it. Intraoral examination revealed an almost non-tender normal skin colored nodule on the lip, which measured 8-mm, and was covered with normal mucosa (Fig. 1). The

Fig. 1. A normal skin colored subcutaneous nodule measuring 8 mm on the mucosal aspect of the right upper lip.
nodule was smooth on palpation, and no discharge of pus or exudates was observed upon gentle pressure. No cervical lymphadenopathy was noted. Under the impression of a mucocele or venous lake, the lesion was totally excised. The patient’s past medical history included hypertension and benign prostate hyperplasia since the age of 72. Antianginal medication had been started 3 months earlier, and there was no recent history of dental manipulation. Histopathological examination showed characteristic basophilic clumps of organism, and sulfur granules with associated suppurative inflammation in the dermis (Fig. 2). Gram staining showed numerous radially oriented, bluish purple, filamentous bacteria with peripheral clubs at its edge (Fig. 3A). AFB staining showed no acid-fast bacilli (Fig. 3B). Actinomycosis was diagnosed after other diseases that show sulfur granules, like nocardiosis and botryomycosis, had been ruled out. Sulfur granules observed in nocardiosis contain gram-positive, weakly acid-fast bacilli, and those observed in botryomycosis consist of nonfilamentous cocci or bacilli, which may be gram-positive or negative. No pus or other symptoms suggestive of infectious origin were observed; therefore, we did not consider performing bacterial culture or other laboratory methods for identification of a causative

Fig. 2. (A) Sulfur granules associated with suppurative inflammation in the dermis (H&E, ×40). (B) The magnified view shows a group of filamentous bacteria forming a sulfur granule with peripheral Hoeppli-Splendore phenomenon (H&E, ×400).

Fig. 3. (A) No acid-fast-bacilli are seen (AFB, ×200). (B) A gram stain demonstrates numerous, radially oriented, gram-positive filamentous bacteria and peripheral clubs at its edge (Gram stain, ×400).