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Primary cutaneous actinomycosis: A first case report from Kurdistan, Iraq

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Introduction: Actinomycosis is a chronic infectious disease of the cervicofacial area, thorax, or abdomen and caused by the anaerobic gram positive bacterium " *Actinomyces israelli*. It is a commensal of human and characterized by a suppurate fibrotic inflammation, which spread directly to the contagious tissues. The main clinical types are cervicofacial, thoracic, abdominal, pelvic, and the primary cutaneous which is very rare. The infective agents are member of the normal flora and are frequently cultured from bronchi, gastrointestinal tract, and female genital tract. They are considered as opportunistic pathogen. Two groups of actinomycetes are recognized according to their metabolism; the fermentative and the oxidative. The first causes actinomycosis, while the second include agents causing Actinomycetoma and Nocardiosis. It has been suggested that poor dental and oral hygiene in addition to frequent trauma provide the portal of entry. To our knowledge this is the first case report in Kurdistan Region/Iraq.

Case Report: A fifty-five year old woman presented with multiple discharging sinuses on both legs since 9 years with slowly progressive course; from rural area in Kurdistan region-Iraq. Bacteriological study including macroscopical and cultural examination of the discharge and crust taken deep from the lesions revealed *Actinomyces* as the causative organism. Good response with complete healing was noticed after 4 months of treatment with Benzathine penicillin.

Discussions: Actinomycosis was common in the pre-antibiotic era and is less frequent now. The clinical presentations of the disease, which can affect any organ, are variable and the disease has been called the most misdiagnosed disease. The presentation of the studied case with slowly progressive chronic discharging sinuses on both legs since 9 years brought our attention to the primary cutaneous actinomycosis as the most likely diagnosis. Bacteriological diagnosis was obvious. Although, the presence of sulfur granules is characteristic of the disease. However, its absence as in this case does not rule out the diagnosis of this disease. Chronic course of the disease and usage of different tropical and systemic therapies may have influenced the appearance of these granules. Actinomycosis must be treated with high doses of antimicrobials for a long period may be needed for such cases. Intravenous administration of 18-24 million units of penicillin fro 2-8 weeks, followed by oral therapy with penicillin or amoxicillin for 6-12 months may be used in serious cases. However, since our patient were living in rural area far a way from any health center, we found it more practical and helpful to use a long acting penicillin (Benzathine penicillin) intramuscualrly weekly to avoid frequent vist. The excellent response observed by the disapperance and healing of the sinuses was delighting.

Conclusions: Primary cutaneous actinomycosis is very rare; its clinical presentation is variable. Therefore, awareness of the full clinical spectrum of the disease is important, which should be added with bacteriological study to confirm the diagnosis.

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