Cutaneous and Muscular Abscesses Secondary to Actinomyces meyeri Pneumonia

Actinomyces organisms are commensals of the oral cavity that grow as obligate or facultative anaerobes; these organisms may produce infection after local trauma, surgery, or aspiration. The main forms of actinomycosis are cervicofacial, thoracic, and abdominal; most cases are due to Actinomyces israelii, while other Actinomyces species are only occasionally implicated. Hematogenous dissemination is an infrequent complication of actinomycosis [1]. We report a case of disseminated actinomycosis with uncommon localizations that was due to Actinomyces meyeri.

Table 1. Summary of data on 23 reported cases of Actinomyces meyeri infections.

<table>
<thead>
<tr>
<th>Form of infection (secondary foci)</th>
<th>No. of cases reported</th>
<th>Age range (y)</th>
<th>Concomitant bacteria</th>
<th>[Reference(s)]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disseminated (thorax, skin, bone, muscle, liver, kidney, retroperitoneum)</td>
<td>14</td>
<td>16–62</td>
<td>Bacteroides species, Actinobacillus species, Fusobacterium species, Streptobacillus species, Peptococcus species, Streptococcus species</td>
<td>[PR, 2–8]</td>
</tr>
<tr>
<td>Musculoskeletal</td>
<td>3</td>
<td>14–50</td>
<td>Propionibacterium species, Bacteroides species, Eikenella species, Peptococcus species</td>
<td>[5, 8, 9]</td>
</tr>
<tr>
<td>Cervicofacial</td>
<td>2</td>
<td>26–64</td>
<td>Actinobacillus species</td>
<td>[5, 8]</td>
</tr>
<tr>
<td>Thorax</td>
<td>2</td>
<td>13–55</td>
<td>Eikenella species</td>
<td>[2, 5]</td>
</tr>
<tr>
<td>Breast</td>
<td>2</td>
<td>39–56</td>
<td>Not specified</td>
<td>[8]</td>
</tr>
</tbody>
</table>

NOTE. PR = present report.

A 34-year-old man was admitted to the hospital because of a 3-week history of two painful swellings in the right thigh and in the right paravertebral region at the cervicothoracic junction. No other symptoms were reported. He was afebrile and in generally good health. Physical examination revealed poor dental hygiene with gingivitis. A right paravertebral tender swelling (10 × 10 cm in size) was palpated at the level of the low cervical-high thoracic spine. A second lesion (5 × 5 cm in size) was felt in the inner compartment of the right thigh. The skin overlying these lesions was normal.

Laboratory studies disclosed an erythrocyte sedimentation rate (ESR) of 118 mm/h and a WBC count of 15.2 × 10⁹/L. A chest roentgenogram and a CT of the right thigh revealed an abscess in the musculi vastus medialis.

Cultures of the sputum were negative. Fifteen milliliters of pus, which contained gram-positive and gram-negative bacilli, was drained from the thigh abscess. Therapy with metronidazole and amoxicillin/clavulanic acid was started. One week later, cultures of the pus yielded A. meyeri and Fusobacterium nucleatum; these cultures were performed on Schaedler’s medium after enrichment in a thioglycollate broth.

Therapy with penicillin G was begun, and the patient’s condition improved. The patient was discharged 10 days later and still received ceftriaxone therapy (2 g daily) as an outpatient. After 4 weeks, the abscesses and the lung infiltrate had resolved. The ESR and WBC count were normal. Therapy with oral amoxicillin was then given for 12 months, and there was no recurrence of the disease.

This patient presented with actinomycotic abscesses in the muscle and skin that were secondary to dissemination from a pulmonary focus of infection due to A. meyeri. The lack of respiratory symptoms was not surprising because thoracic actinomycosis is frequently found incidentally on routine chest roentgenograms [1]. Poor oral hygiene, gingivitis, and carious teeth, all of which our patient had, are predisposing factors for thoracic actinomycosis.

A. meyeri is an oral saprophytic obligate anaerobe; it differs from other Actinomyces organisms by morphological and biochemical features and by a greater propensity to disseminate [2–4]. We found 23 previous reports of A. meyeri infections in the literature (table 1). To our knowledge, thoracic infection with simultaneous dissemination to muscle and subcutaneous tissue has not been previously reported. Cultures of specimens from actinomycotic lesions frequently disclose associated organisms, and in the present case, F. nucleatum was isolated with A. meyeri.

Actinomycosis is usually treated with penicillin G [1]. Therapy with tetracyclines, erythromycin, clindamycin, and cephalosporins has also resulted in cures. Our patient was treated with ceftriaxone, which may be an alternative to penicillin. Since this agent is given


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Clinical Infectious Diseases 1996;22:185–6
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References


Xanthogranulomatous Cholecystitis Due to Invasive Candida albicans in a Patient with AIDS

Candidiasis of the gallbladder is an infrequent cause of cholecystitis, and it is usually restricted to patients with underlying conditions that predispose them to candidal infections such as immunosuppressive therapy, diabetes, and malignancy [1, 2]. Remarkably, candidal cholecystitis is not a well-recognized complication of AIDS. Indeed, reports of candidal cholecystitis in patients with AIDS are extraordinarily rare [3]. Not only are Candida species infrequently associated with cholecystitis, but their role as a true pathogen in this setting is not well established [1]. The frustrating inability to histologically demonstrate tissue invasion by fungal forms suggests that Candida organisms may simply colonize the mucosa of an already inflamed gallbladder. We report a case of candidal cholecystitis in a patient with AIDS, in which histological and ultrastructural documentation of tissue invasion was possible.

A 32-year-old HIV-seropositive man with a history of thrush, Pneumocystis carinii pneumonia, and cryptococcal meningoencephalitis presented with a 1-year history of episodic and worsening abdominal pain localized to the right upper quadrant. Laboratory findings were notable for a CD4 cell count of 0 and elevation of liver transaminase levels (aspartate aminotransferase, 245 U/L; alanine aminotransferase, 323 U/L) and alkaline phosphatase (1,932 U/L). Abdominal ultrasonography demonstrated a single impacted calculus within the neck of the gallbladder. The gallbladder wall did not appear to be thickened. On endoscopic retrograde cholangiopancreatography, the intrapancreatic ducts and common bile duct were distended but not obstructed. Dye entered the cystic duct, but it did not fill the gallbladder. An attempt to remove the gallbladder by use of a laparoscopic approach was unsuccessful because of extensive inflammatory changes within the gallbladder. Removal of the gallbladder was completed via an open procedure.

Figure 1. A pseudohyphal fungal organism located deep in the gallbladder wall of a patient with AIDS who developed xanthogranulomatous cholecystitis due to Candida albicans. In the background are abundant histiocytes with granular cytoplasm (thick arrows) (periodic acid-Schiff stain). Inset: fragmented fungal forms (thin arrows) within secondary lysosomes (transmission electron microscopy, ×8,000).