Septic Synovitis and Arthritis Due to *Corynebacterium striatum* Following an Accidental Scalpel Injury

Although not as well known as other non-*diphtheriae* corynebacteria, *Corynebacterium striatum* has recently been the subject of three reviews [1–3] and several case reports. It has been described as the cause of four cases of bacteremia; three cases each of endocarditis, pneumonia and empyema, and CSF-shunt infection; two cases of peritonitis; and one case each of an exacerbation of chronic obstructive airway disease, keratitis, conjunctivitis, finger granuloma, meningitis, and endometritis. To our knowledge, we have recently observed the first case of septic synovitis due to *C. striatum*.

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Figure 1. MRI scan of the left elbow of a gastroenterologist with septic synovitis and arthritis due to *Corynebacterium striatum* following an accidental scalpel injury. A. Axial T₂-weighted image of the left elbow demonstrating a large joint effusion (asterisks). B. Axial T₁-weighted gadolinium-enhanced images with fat suppression demonstrating significant enhancing synovitis (arrow). H = humerus; U = ulna.

One of the authors (N. C.), a 51-year-old healthy, male, gastroenterologist, performed a percutaneous endoscopic gastrostomy on a cachectic, 80-year-old man with chronic laryngeal dysfunction. During the procedure, after passing the scalpel (which was used only to incise the skin) to an assistant, N.C. was accidentally lacerated on his left arm with the scalpel blade. The laceration was 2 cm in length, penetrated through the subcutaneous tissue, and extended to 2 cm below the left elbow. The wound was cleansed with iodinated antiseptic, flushed with saline, and then sutured closed. Antimicrobial therapy was not given.

Three days later, N.C. noted left elbow pain, swelling, and erythema, followed by chills and fever. Examination of the elbow revealed fluctuance, suggestive of septic arthritis, which was confirmed by an MRI scan (figure 1). Incision and drainage of the elbow yielded ~25 mL of a yellowish, purulent material; gram staining of the material demonstrated only rare WBCs. Cultures of the purulent material on blood, chocolate, and Columbia BA agar and in thioglycolate broth yielded small, slightly creamy, nonhemolytic and catalase-positive colonies. Gram staining revealed only pleomorphic, gram-positive rods resembling diphtheroids. The rapid API-Coryne (bioMérieux, Marcy l’Etoile, France) strip was glucose- and sucrose-positive, maltose-negative, and diagnostic of *C. striatum*. The organism was susceptible to β-lactams, aminoglycosides, tetracycline, ciprofloxacin, and vancomycin and resistant to clindamycin and erythromycin. Susceptibility testing was done by using the Kirby-Bauer method with a standardized inoculum on Mueller-Hinton agar supplemented with sheep’s blood. Because there are no National Committee for Clinical Laboratory Standards (NCCLS) guidelines for susceptibility testing of *C. striatum*, susceptibility testing was performed according to guidelines for streptococci [4]. Laboratory evaluation revealed a WBC of 18,500 mm³ with 91% polymorphonuclear cells. The
Detection of Specific Cellular Immune Response to Bartonella henselae in a Patient with Cat Scratch Disease

Clinical presentation of infection due to Bartonella henselae ranges from a relatively mild lymphadenopathy with few additional symptoms, seen in cat scratch disease (CSD), to life-threatening systemic disease in immunocompromised individuals [1]. The more severe clinical manifestation in immunocompromised hosts points to a role of T cells in the pathogenesis of these infections. We describe a patient with CSD and Reiter’s syndrome, whose cellular immune response to B. henselae was investigated by using a lymphoproliferation assay.

A 27-year-old woman presented with a 4-week history of inguinal lymphadenopathy, and a 1-week history of fever. Despite therapy with trimethoprim-sulfamethoxazole for 10 days, the lymph node had continued to enlarge. Therefore, she was admitted to the hospital. Physical examination was unremarkable except for a tender, dolent, 8-cm × 4-cm right inguinal lymph node and cat scratch lesions on the right leg. She had acquired a young stray cat during her holiday in Sicily 3 months earlier. Serologies for Bartonella henselae and Coxiella burnetii were negative. The patient had been treated with oral

References

Figure 1. Stimulation of peripheral blood lymphocytes of the patient (black bars) and of two representative healthy donors (white and hatched bars) with heat-killed Bartonella henselae in the indicated concentrations. Proliferation was determined after incubation for 5 days. Results are presented as stimulation index (thymidine uptake after antigen stimulation divided by the spontaneous uptake).