**Borrelia burgdorferi** Isolated in British Columbia

Sir—In a report of their experience at a referral center for patients with suspected Lyme disease [1], Burdge and O'Hanlon describe British Columbia as an area that is not known to be endemic for Lyme borreliosis.

Recently, however, *Borrelia burgdorferi* and/or variants of the organism have been isolated from ticks and rodents from eight sites widely distributed throughout British Columbia. This research was a collaborative effort of the Vancouver, British Co-

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**Reply**

Sir—As reported by Kindree, on 14 June 1993, the acting Provincial Health Officer announced that *Borrelia burgdorferi*, or a very similar organism, had recently been isolated from ticks found in British Columbia. This information has not yet been confirmed. It would not be surprising, however, to find that British Columbia—like California, Oregon, and Washington states—has become an area of low endemicity for Lyme disease. At the time our paper was written and during the time we were assessing the patients reported [1], the region was definitely not known to be an area of endemicity [2]. Extensive serological testing, culturing of ticks, and clinical assessment of patients had all failed to demonstrate evidence for endemic Lyme disease.

More important than the issue of whether British Columbia is now an area of low endemicity is the major finding of our study—which is in no way altered by this recent information—that many individuals with suspected Lyme borreliosis will prove to have an alternative medical diagnosis when they are carefully assessed clinically.

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**References**


**Staphylococcus aureus** Meningitis After Short-Term Epidural Analgesia

Sir—The advantage of administering spinal analgesics via the epidural route (vs. the subarachnoid route) is that the meninges are not physically breached, which reduces the danger of meningitis [1]. We report a case of *Staphylococcus aureus* meningitis that occurred shortly after the withdrawal of an epidural catheter that had been in place for 8 days, during which time no complications had occurred.

A 39-year-old immunocompetent female was admitted to the hospital with incapacitating lumbar pain. An L4-5 radicular decompression had been performed on the patient 7 years earlier. After the patient was bedridden for 1 month, an experienced anesthesiologist working under sterile conditions in the Pain Unit placed an epidural catheter without entering the subdural space. A solution containing corticosteroids and bupivacaine was administered (50 mL per day) by an infusion pump through the epidural catheter.

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After 8 days the catheter was removed and sent for routine culture. The patient was discharged from the hospital. One day later, the patient experienced bitemporal and occipital headache, and 3 days later she had chills and occasionally vomited. On the fifth day after removal of the epidural catheter, a computed tomographic scan of the lumbar region did not show an epidural abscess. Two days later the patient's condition had further deteriorated. Physical examination revealed neck stiffness and no abnormality of the insertion site of the epidural catheter. A lumbar puncture was performed; laboratory results showed 320 leukocytes/mL (70% neutrophils and 30% monocytes) and a total protein level of 1.23 g/L in the CSF.

Culture of the epidural catheter tip and the CSF yielded methicillin-sensitive *S. aureus*. The pattern of antibiotic susceptibilities was similar for organisms cultured from both sites. The patient was treated with cloxacillin, and she recovered without developing sequelae in connection with epidural treatment.

Arner et al. [2] reported only one case of meningitis in connection with epidural treatment among 750 patients treated with morphine via the epidural route for an average period of 124 days and among 18 patients receiving morphine intrathecally for an average of 47 days. Hassenbusch et al. [3] found no instances of meningitis among 41 patients treated with a constant infusion of morphine through epidural catheters for at least 1 month. In a report of a series of 33 cases of *S. aureus* meningitis [4], prior insertion of an epidural catheter was not mentioned.

Isolated case reports of bacterial meningitis after epidural administration of anesthetic have been associated with epidural abscess [5] or have been attributed to either local spread from clinical cellulitis at the insertion site or blood-borne spread [6].

The least understood step in the pathogenesis of meningitis is the mechanism of bacterial penetration of the blood-brain barrier and entry into the CSF [7]. The present case adds to the puzzle, showing the possibility that bacteria from an infected catheter tip in the epidural space can reach the CSF even with an apparently intact dura mater.

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References


Multiresistant *Corynebacterium xerosis* as a Cause of Pneumonia in a Patient with Acute Leukemia

Sir—The pathogenicity of the nocardia corynebacteria in humans has been recognized in the last two decades [1, 2]. *Corynebacterium xerosis* is a normal commensal of the conjunctivae, nasopharynx, and skin. On direct examination it appears as a gram-positive, nonmotile, nonsporulating, catalase-positive, rod-shaped bacterium. Previous reports have described the susceptibility of immunocompromised hosts (patients with endocarditis or pneumonia) to *C. xerosis* infections [1, 2]. However, *C. xerosis* is not considered to be a cause of pneumonia in humans. We describe a case of *C. xerosis* pneumonia in a severely immunosuppressed patient in whom the causative strain that was isolated had an unusual antibiotic resistance profile.

A 63-year-old man with a 2-month history of acute myeloid leukemia was admitted to our respiratory intensive care unit for acute respiratory failure and septic shock. Because of fever and ongoing bone marrow aplasia, 10 days before admission to the hospital he had started receiving an antibiotic regimen that included ceftazidime (3 g/d), amikacin (350 mg/d), pefloxacin (800 mg/d), and amphotericin B (20 mg/d). During admission to the hospital, the patient was severely hypotensive and polyneic; he had a temperature of 39.6°C. A roentgenogram of the chest showed diffuse, bilateral, patchy infiltrates. The white blood cell count was 0.3 × 10⁹/L, the hemoglobin level was 7.4 g/dL, and the platelet count was 39 × 10⁹/L.

The patient was immediately mechanically ventilated, and a diagnostic bronchoscopic procedure that included bronchoalveolar lavage (BAL) was performed. Gram staining of BAL specimens revealed gram-positive rods. Acid-fast staining, Grocott–Gomori methenamine–silver nitrate staining, and direct immunofluorescence were negative for *Legionella pneumophila*. Quantitative culture of BAL specimens yielded *C. xerosis* at 10⁵ cfu/mL (a significant bacterial count), and culture remained neg-