

Listeria monocytogenes associated with pyogenic spondylitis in a 92-year-old woman

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A 92-year-old woman with a history of hypertension presented to the hospital with a 1-day history of fever and back pain. One month earlier, she had been admitted to hospital for a L1 compression fracture, and 1 week before the current presentation, she had had nonbloody diarrhea for 3 days. On examination, she was febrile (38.3°C) and had L1–L2 tenderness but no signs of meningeal inflammation. She had a normal leukocyte count, and mildly raised C-reactive protein and erythrocyte sedimentation rate.

We admitted the patient to the hospital with a differential diagnosis of meningitis, pyogenic spondylitis and epidural abscess. A magnetic resonance imaging (MRI) scan of her vertebra was consistent with pyogenic spondylitis at L1/2 (Figure 1) and cerebrospinal fluid analysis was normal, ruling out meningitis. *Listeria monocytogenes* was isolated from blood cultures, and we commenced ampicillin on day 2 of her hospital stay. After 2 weeks of antimicrobial therapy, her inflammatory markers improved but her back pain worsened. On day 18, gadolinium contrast-enhanced MRI showed an epidural abscess at L2. We prescribed 8 weeks of antibiotic therapy (6 wk ampicillin and 2 wk amoxicillin) for *L. monocytogenes* associated with pyogenic spondylitis and epidural abscess.¹ Her pain improved from the second week of treatment, and she was able to walk at the time of discharge.

Listeriosis, most often caused by food-borne *L. monocytogenes*, has been associated with a mortality rate of 30%.² Patients usually present with fever and diarrhea, but symptoms suggestive of meningitis may occur. Bony infection, as in our patient, is uncommon.^{2,3} In Canada, listeriosis is a notifiable disease, with 158 cases of invasive disease reported in 2018.⁴ Risk factors include advanced age, immunodeficiency and immunocompromise, liver cirrhosis, diabetes and pregnancy.^{2,5} Foods from which *L. monocytogenes* may be acquired include fresh produce, hot dogs, delicatessen meats and unpasteurized milk products; adequate preparation and cooking prevents transmission.⁵ Our patient did not consume dairy products, but her diet was high in raw vegetables, including tomatoes, ginseng, lettuce and cabbage; therefore we were not able to determine the exact source of infection.

References

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Figure 1: Fat suppressed, weighted magnetic resonance imaging of the lumbar spine of a 92-year-old woman, showing hyperintensity of the L1/2 vertebrae and discus, consistent with pyogenic spondylitis.

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The authors have obtained patient consent.

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