

## *Neisseria lactamica* Arthritis and Septicemia Complicating Myeloma<sup>∇</sup>

*Neisseria lactamica* is a common and normally harmless commensal of the upper respiratory tract found especially in young children. In the July 2006 edition of this journal, Zavascki and colleagues reported the first case of *N. lactamica* causing cavitary lung disease in an adult organ transplant recipient (3). The same year, Wang et al. reported a case of *N. lactamica* bacteremic pneumonia in an adult with liver cirrhosis (2). Apart from a 1991 report of *N. lactamica* meningitis following skull trauma (1), there are no other published reports of invasive *N. lactamica* infection in adults or cases listed in selected bacteremia databases from New Zealand, Australia, or North America.

We present a case of *N. lactamica* arthritis and septicemia in a patient immune suppressed by myeloma and corticosteroids. This 60-year-old male from a small mining city in the West Australian outback presented with 1 day of rigors, hypotension, and acute knee pain and swelling. He had been prescribed prednisolone at 50 mg daily, reduced to 15 mg daily, for an infective exacerbation of chronic obstructive airways disease during the 17 days before admission. The myeloma was associated with an IgG kappa-type paraprotein, mild suppression of serum IgA and IgM, and lytic bony lesions. HIV serology was negative.

The cloudy knee fluid aspirate had neutrophilic pleocytosis (100 white cells/mm<sup>3</sup>) and Gram-negative cocci by microscopy. Culture of both joint fluid and blood yielded a *Neisseria* species, provisionally identified as *Neisseria gonorrhoeae*. This caused distress for the patient and his wife, who denied sexual activity for 5 years.

The isolate was oxidase and catalase positive but Super-oxol and Phadebact Monoclonal GC test (Bactus AB, Huddinge, Sweden) negative. API NH (bioMérieux, La Balmeles-Grottes, France) identified *N. lactamica* (99.9%, profile 5041). BLAST analysis (<http://www.ncbi.nlm.nih.gov/blast/>) of an amplified 2,098-nucleotide 16S rRNA sequence (GenBank accession no. GU980596) showed 98% homology with both *N. lactamica* (GenBank accession no. AJ239305.1) and *Neisseria polysaccharea* (GenBank accession no. AJ239314.1). The isolate was *o*-nitrophenyl-β-D-galactopyranoside (ONPG) positive and generated acid from sucrose, excluding *N. polysaccharea*. Our isolate was thus identified biochemically and genetically as *N. lactamica* but may represent a new virulent strain. The penicillin MIC was 3 mg/liter, and the ceftriaxone MIC was 0.006 mg/liter, both determined by Etest. An echocardiogram showed no endocarditis, and the neisserial infection was cured with 11 days of ceftriaxone therapy.

It should not be a surprise that *N. lactamica* causes septic arthritis, as there are case reports of septic arthritis, discitis, or bursitis caused by other commensal *Neisseria* spp., including *N. sicca*, *N. subflava*, and *N. mucosa*. *Neisseria meningitidis* (especially serogroup W-135) and *N. gonorrhoeae* also cause septic arthritis. Commensal neisserial infections have often been re-

ported in compromised patients, including those who are neutropenic, have invasive devices, or have undergone procedures. Meningococcal infections (especially nonpathogenic strains) have also been reported in compromised patients, including those with complement deficiency, prior corticosteroid use, myeloma, Waldenström's disease, and hypogammaglobulinemia.

Like the case presented by Zavascki et al. (3), our patient represents a rare example of invasive adult *N. lactamica* infection and highlights the propensity for commensal neisserial species to cause bloodstream and joint infections and to be of special concern to patients with immune compromises. We encourage others isolating clinically significant *N. lactamica* strains to deposit the sequences in GenBank to enable further study of this emerging pathogen in compromised patients.

### REFERENCES

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