

Hospital bacteria outbreak linked to nasal spray

July 21 2011

Infection control researchers investigating a rare bacterial outbreak of *Burholderia cepacia* complex (Bcc) identified contaminated nasal spray as the root cause of the infections, leading to a national recall of the product. An article in the August issue of *Infection Control and Hospital Epidemiology*, the journal of the Society for Healthcare Epidemiology of America (SHEA), describes how researchers were able to trace the outbreak back to the nasal decongestant spray.

Bcc is a group of Gram-negative bacteria that can cause hard-to-treat infections. Patients with underlying medical conditions such as [lung disease](#) and weakened immune systems are at greater risk of contracting Bcc. When patients in a Denver children's hospital began testing positive for the bacteria in 2003, investigators suspected that a batch of Major Twice-a-Day [Nasal Spray](#), a brand that each of the patients had used, might be to blame. However, standard tests of the spray did not find any bacteria initially.

Noticing some peculiarities in the initial tests, the investigators decided to retest the spray using a non-standard culture medium. The second set of tests was positive for Bcc, the same strain as was identified in patients. The nasal spray contained a preservative agent that can interfere with standard [bacterial cultures](#) and the second set of tests neutralized the preservative, allowing the detection of the bacteria.

The spray was voluntarily recalled by the manufacturer, but the findings raise lingering questions about how manufacturers should test nasal spray

products before distribution. "If standard culturing methods were used by the manufacturer then they may not have [discovered] this organism," the researchers write.

"Nasal spray products are among the most widely used over-the-counter pharmaceuticals, but to date they are not required by the FDA to be sterile," said Susan Dolan, one of the article's authors. "Given the implications of Bcc infections we question this decision."

Other products, such as mouthwash, nebulization therapy, tap water, disinfectants, and reusable temperature probes have previously been implicated as Bcc outbreak sources.

More information: Susan A. Dolan, Elaine Dowell, John LiPuma, Sondra Valdez, Kenny Chan, and John F. James, "An Outbreak of *Burkholderia cepacia* Complex Associated with Intrinsically Contaminated Nasal Spray." *Infection Control and Hospital Epidemiology* 32:8 (August 2011).

Provided by Society for Healthcare Epidemiology of America

Citation: Hospital bacteria outbreak linked to nasal spray (2011, July 21) retrieved 24 June 2024 from <https://medicalxpress.com/news/2011-07-hospital-bacteria-outbreak-linked-nasal.html>

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