

Difficult-to-Treat Staphylococcal Infections in Men Who Have Sex with Men

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The full report is titled “Emergence of Multidrug-Resistant, Community-Associated, Methicillin-Resistant *Staphylococcus aureus* Clone USA300 in Men Who Have Sex with Men.” It is in the 19 February 2008 issue of *Annals of Internal Medicine* (volume 148, pages 249-257). The authors are B.A. Diep, H.F. Chambers, C.J. Graber, J.D. Szumowski, L.G. Miller, L.L. Han, J.H. Chen, F. Lin, J. Lin, T.H. Phan, H.A. Carleton, L.K. McDougal, F.C. Tenover, D.E. Cohen, K.H. Mayer, G.F. Sensabaugh, and F. Perdreau-Remington.

What is the problem and what is known about it so far?

Staphylococcus aureus is a type of bacteria that lives on healthy people’s nose and skin. It does not usually cause problems. However, if there is a break in the skin or if a person is sick, the bacteria can infect the skin or the tissues underneath it. In severe cases, it can enter the bloodstream and cause infection elsewhere in the body. Doctors have used antibiotics to treat regular *S. aureus* for so long that some kinds of the bacteria have developed resistance. Infections with antibiotic-resistant *S. aureus* are also called methicillin-resistant *S. aureus* (MRSA) infections. Once, MRSA infections were found only in patients who had spent time in a hospital. But now MRSA infections are common in otherwise healthy people who have never been treated with antibiotics and who have never spent time in a hospital (community-acquired MRSA). In addition, in the past 2 years, doctors in San Francisco and Boston have found forms of MRSA that are resistant to multiple antibiotics (multidrug-resistant MRSA). Multidrug-resistant MRSA infections were more frequent in gay men and in people with HIV infection. If MRSA is becoming less responsive to antibiotics and is spreading into the community, otherwise healthy people may develop infections that are difficult to treat.

Why did the researchers do this particular study?

To see how common multidrug-resistant MRSA infection is in San Francisco and to identify risk factors for the infection.

Who was studied?

532 cases of multidrug-resistant MRSA infection in San Francisco. To identify risk factors for the infection, researchers studied 2 other groups of people: 183 people with HIV infection treated at an HIV clinic at a San Francisco hospital and 130 people, only some of whom had HIV infection, treated at a clinic in Boston.

How was the study done?

Doctors throughout San Francisco had sent samples to hospital laboratories to identify the bacteria that caused infection. The researchers counted the number of samples that grew multidrug-resistant MRSA to estimate the number of infections in the city. They then reviewed the medical charts of people in the 2 clinics to discover how people with multidrug-resistant MRSA infection differed from those without it.

What did the researchers find?

The frequency of multidrug-resistant MRSA infection varied by area. It was much more common in areas where male same-sex couples lived. The researchers also found that sex between men was a strong risk factor for the infection. One man who lived in Boston had multidrug-resistant MRSA infection and had traveled frequently to San Francisco, where he had sex with men. He had the same kind of infection as people in San Francisco, suggesting that travel could spread the infection.

What were the limitations of the study?

Not many multidrug-resistant MRSA infections were found. As a result, the researchers’ estimates of infection risk were not very precise. Also, because the researchers did not actually interview study participants, they could not really say what caused the infections.

What are the implications of the study?

Multidrug-resistant MRSA infection seems to be more common among men who have sex with men. It might be sexually transmitted among these men.

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