

hVISA linked to high mortality: study

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A MRSA infection with a reduced susceptibility to the potent antibiotic drug vancomycin is linked to high mortality, according to a Henry Ford Hospital study.

Researchers found that patients who contracted a [MRSA infection](#) with heteroresistance, called hVISA, stayed in the [hospital](#) longer, were more likely to have the infection return after 90 days, and were twice as likely to die from it after 90 days than patients who do not have hVISA.

The study is being presented Sunday at the 50th annual Interscience Conference on Antimicrobial Agents and Chemotherapy in Boston.

"Based on our findings, we recommend that hospitals consider routine testing for hVISA," says Katherine Reyes, M.D., a Henry Ford Hospital Internal Medicine physician and the study's lead author. "It remains controversial how differently we will manage these patients upfront. Close follow-up on these patients to make sure their infection is resolved or controlled may save lives."

MRSA, or Methicillin-resistant *Staphylococcus aureus*, is a [bacterium](#) that is resistant to common antibiotics like [penicillin](#). It can cause skin, bloodstream and surgical wound infections and pneumonia. The majority of infections occur among patients in hospitals or other health care settings, though a growing number of infections are being acquired by otherwise healthy people outside those settings.

MRSA strains can be resistant to many drugs, though they are typically

susceptible to the antibiotic vancomycin. MRSA infections are often treated with vancomycin administered intravenously.

The study followed 521 patients with MRSA bloodstream infections who were admitted between January 2006 to September 2009 to Henry Ford, an 805-bed tertiary care hospital, education and research complex in Detroit. These infections were screened for heteroresistance, and 19 hVISA cases were identified.

Dr. Reyes and researchers then compared characteristics and outcomes of the 19 hVISA patients against 19 non-hVISA patients, eliminating such factors as age, source of infection and level of sickness. The results:

- Six hVISA patients died within 30 days compared to three non-hVISA patients.
- Twelve hVISA patients died within 90 days compared to six non-hVISA patients.
- Five hVISA patients saw their infection return after 90 days compared to zero for non-hVISA patients.
- hVISA patients stayed on average four more days in the hospital than non-hVISA patients.
- hVISA patients were more likely to have received [vancomycin](#) in the past.

Provided by Henry Ford Health System

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