

Pneumonia most common infection after heart surgery

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Pneumonia — not a deep incision surgical site infection — is the most common serious infection after heart surgery, according to new research (Abstract 12247) presented at the American Heart Association's Scientific Sessions 2011.

The study also revealed that most infections occur about two weeks after surgery, not one week as physicians previously thought.

"It's not what we expected to find," said Michael A. Acker, M.D., the study's lead researcher and professor and chief of cardiovascular surgery at the University of Pennsylvania Medical Center in Philadelphia, Pa.

In abstract 12247, researchers analyzed more than 5,100 patients in a [heart surgery](#) registry. Patients, average age 64, were treated at nine U.S. academic medical centers and one Canadian center. The median time to major infection was 14 days after heart surgeries. Forty-two percent of all major infections occurred after hospital discharge.

"Half of these patients had no evidence of infection before they were discharged from the hospital," Acker said. "Then they had to return because of the new infection. One implication is that patients must be followed more closely after discharge."

In this study, which excluded patients who were infected before surgery, researchers found 742 infections: 278 were classified as major infections (occurring in 4.5 percent of patients) and 464 were minor (in

8.1 percent of patients). Of the major infections:

- [Pneumonia](#), infection of the lungs, occurred in 2.4 percent of all patients.
- *C. difficile* colitis, an intestinal infection, occurred in 1.0 percent.
- Bloodstream infections occurred in 0.7 percent.
- Deep-incision surgical site infections occurred in 0.5 percent.

Minor infections included urinary tract and superficial incision site infections.

The most commonly performed procedures were isolated coronary artery bypass graft and aortic and mitral valve surgeries. Seventy-four percent were elective surgeries and 26 percent were non-elective or emergency surgeries.

Several risk factors appeared to increase the risk of developing infection, including congestive heart failure, hypertension, chronic lung disease, corticosteroid use prior to surgery, length of stay and length of cardiopulmonary bypass time.

"In the next level of analysis, the focus will be on differences in care, from the types of dressings, the types of antibiotics, and the types of surgical preparations, to show what processes of care are associated with decreased incidence of infections," Acker said. "The registry will allow us to modify our best practices to manage post-operative infections."

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Skin preparation reduces cardiac implantable device infections

In another study (abstract 10041), special skin preparations for 3,700 patients significantly reduced infections from cardiac implantable electronic devices.

Researchers at a Milwaukee hospital washed patients' skin with a special antibacterial solution the night before and morning of the procedure. They also included a strict three-minute drying time for the surgical skin preparation. These steps decreased implant infection rates from 1 percent to 0.24 percent at a year following the implant placement.

More staphylococcal bacterial infections are occurring after implantation procedures, said Renee Koeberl, R.N., M.S.N., lead author of the study.

Provided by American Heart Association

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