Medical Xpress

Antibiotics before heart surgery protect against infection

December 23 2013

A new study found preoperative antibiotic therapy administered within two hours of cardiac surgery decreased the risk of developing surgical site infections (SSIs) significantly. The study was published in the January issue of *Infection Control and Hospital Epidemiology*, the journal of the Society for Healthcare Epidemiology of America.

"Antimicrobial prophylaxis can reduce the risk of SSIs following many operations, however that efficacy diminishes or disappears if antibiotics are given either too early or after incision," said Renato Finkelstein, MD, lead author of the study. "Despite the general acceptance of this concept in guidelines, wide variations in preoperative antibiotic administration practices have been reported."

Dr. Finkelstein and his colleagues at Rambam Medical Center in Israel implemented a 10-year prospective cohort study emphasizing an optimized policy for preoperative antibiotic prophylaxis in cardiac surgery that included administering the first dose of antibiotic prophylaxis up to two hours before the first surgical incision. Prophylaxis given at a different time ranged in administration of three hours before to after the surgery.

SSIs were significantly less common among patients who received prophylaxis during the optimized period than patients who received antibiotic prophylaxis at a different time. Of the 2,637 patients included in the study, 8.3 percent (206 patients of 2,536) who received preoperative antibiotics within a two-hour window of the first incision

developed an SSI, compared with 13.9 percent (14 patients of 101) of patients who received antibiotic prophylaxis at a different time. Additionally, in the last two years of the study near complete compliance of optimized administration of preoperative antibiotics was achieved.

"Our infection control program demonstrates the positive collaboration surgeons and infection control personnel can have to improve patient safety and reduce the risk of postsurgical infection," said Finkelstein.

More information: Renato Finkelstein, Galit Rabino, Tania Mashiach, Yaron Bar-El, Zvi Adler, Victor Kertzman, Oved Cohen, Simcha Milo. "Effect of Preoperative Antibiotic Prophylaxis on Surgical Site Infections Complicating Cardiac Surgery." *Infection Control and Hospital Epidemiology* 35:1 (January 2014).

Provided by Society for Healthcare Epidemiology of America

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