

Delaying Surgery After PCI Cuts Kidney Injury

BY MITCHEL L. ZOLER

FORT LAUDERDALE, FLA. — Combining coronary artery catheterization and cardiac surgery in the same hospital admission was linked to a significantly increased risk for acute kidney injury (AKI), compared with performing the surgery during a second, later hospitalization, a single-center study of more than 600 patients showed.

AKI in cardiac surgery patients has been linked to significantly worse long-term survival. "If there is a way to safely manage patients medically between catheterization and surgery, that should be done, to mitigate the potential for acute kidney injury," Dr. Robert S. Kramer said at the annual meeting of the Society of Thoracic Surgeons.

He acknowledged that some patients have urgent medical reasons to undergo

cardiac surgery within days of their coronary catheterization. However, in many other cases, cardiac surgery becomes scheduled during the same hospital admission as catheterization because of convenience for the patient, the surgeon, or for other physicians involved with the case, Dr. Kramer, director of cardiac surgery research at Maine Medical Center in Portland, said in an interview.

The study reviewed 668 consecutive

patients who underwent cardiac surgery subsequent to PCI at Maine Medical Center during 2008 who were not on dialysis and did not require emergency procedures while hospitalized. Surgery during a subsequent hospitalization was performed an average of 39 days after PCI in 211 patients, while in 457, surgery was performed an average of 3 days after PCI during the same hospitalization.

The patients' average age was 68 years and about a quarter were women. The immediate surgery patients had a significantly higher prevalences of coronary artery disease, MI during the week before surgery, LVEF of less than 40%, and elevated white cell count.

The rates of elective and urgent surgery, respectively, were 86% and 14% in the patients whose surgery was deferred for a second hospitalization, compared with 13% and 87% in patients who had their catheterization and surgery in a single hospitalization. Coronary by-



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Limit cardiac surgery within a few days after catheterization to patients who clearly need rapid intervention.

DR. KRAMER

pass surgery alone occurred in 53% of the deferred patients and 60% of those with a single hospitalization, with the other surgeries divided between valve alone or valve plus bypass.

The incidence of AKI, defined as a creatinine measure that increased by at least 50% over baseline or that rose by at least 0.3 mg/dL over baseline, during or immediately after surgery was 34% in the patients hospitalized a second time for their surgery and 50% in those who had their surgery in their first hospitalization, a significant difference.

No other perioperative outcome parameters differed significantly between the two groups, including death, Q-wave MI, or stroke. The perioperative mortality rate was 2% in patients with deferred surgery and 4% in those with more immediate surgery.

In an analysis that adjusted for baseline demographic and clinical differences, patients with deferred surgery had a significant, 45% relative reduction in their rate of AKI, compared with patients with more immediate surgery.

Although the findings are strictly speaking just hypothesis generating, Dr. Kramer contended that the findings are compelling enough to warrant an immediate change in practice: limit cardiac surgery within a few days after catheterization to patients who clearly need rapid intervention.

Dr. Kramer said he had no disclosures relevant to this study. ■

To see a video interview with Dr. Kramer, go to www.youtube.com/CardiologyNews.

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