



1725 I Street NW • Suite 510 • Washington, DC 20006
Tel 202-659-0599 • Fax 202-659-0709 • www.asn-online.org

Contact: Shari Leventhal: 202-416-0658, sleventhal@asn-online.org

EVEN MINOR KIDNEY INJURY INCREASES RISK OF DEATH IN THE HOSPITAL

Washington, DC (September 21, 2005) — For hospitalized patients, even relatively small decreases in kidney function reflecting acute kidney injury (AKI) are linked to an increased risk of death, reports a study in the November *Journal of the American Society of Nephrology*.

Led by Dr. Glenn M. Chertow of University of California San Francisco, the researchers analyzed data on 9,210 hospitalized patients who underwent serum creatinine measurement, a standard test of kidney function. The researchers sought to determine the rate of increases in serum creatinine, a sign of acute kidney injury and whether the occurrence of AKI affected the patients' risk of dying in the hospital.

Just one percent of patients had major increases in serum creatinine, reflecting severe AKI. In contrast, thirteen percent of patients had modest increases in serum creatinine, indicating minor AKI. Both major and modest AKI were more frequent in older, sicker patients and in those who had initially low kidney function.

Patients with AKI were at higher risk of dying in the hospital—the greater the increase in serum creatinine, the greater the risk. Even for patients in the mildest category of AKI, risk of death was 6.5 times higher. The risk remained significant even after adjustment for other factors such as age, severity of illness, and chronic kidney disease.

Patients with AKI spent an average of 3.5 more days in the hospital. They also had significantly higher hospital costs—the average increase was \$7,500, which was equal to approximately 5% of overall costs for all patients. By conservative estimates, AKI may account for excess hospital costs of over \$10 billion per year in the United States.

Previous studies have suggested that AKI is relatively common, affecting five to seven percent of hospitalized patients. However, questions remain about the true rates and consequences of AKI. Most studies have focused on severe reductions in kidney function requiring dialysis or on patients with specific risk factors such as heart surgery.

MORE

The new results suggest that while major AKI is relatively rare, modest AKI affects perhaps 13 percent of hospitalized adults. Patients with AKI are at increased risk of dying in the hospital and have a longer average length of hospital stay, with increased hospital costs. "While less obvious to clinicians than severe AKI requiring dialysis, [milder] AKI may be of equal or greater importance from a public health perspective," Dr. Chertow and colleagues write.

Among the questions yet to be answered is whether the increased risk of death is the direct result of AKI or reflects the severity of the underlying disease. More study is also needed to clarify the definition and rates of AKI. The researchers conclude, "Prevention and effective treatment of hospital-acquired AKI should be a national priority."

The study, entitled "Acute Kidney Injury, Mortality, Length of Stay and Costs in Hospitalized Patients" will be available online at www.jasn.org on Wednesday, September 21 and will appear in print in November's *Journal of the American Society of Nephrology*.

The ASN is a not-for-profit organization of 9,000 physicians and scientists dedicated to the study of nephrology and committed to providing a forum for the promulgation of information regarding the latest research and clinical findings on kidney diseases.

###