

Small Creatinine Changes Mark Early Sepsis Death

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PHOENIX, ARIZ. — Small increases in serum creatinine that are not currently viewed as signaling renal dysfunction are highly predictive of mortality in patients with severe sepsis, William Macias, M.D., reported at a meeting sponsored by the Society of Critical Care Medicine.

In a review of data on 1,226 patients, 28-day mortality reached 42.9% in patients

whose creatinine rose by 0.2-0.49 mg/dL from baseline during the first 24 hours, said Dr. Macias of Lilly Research Laboratories in Indianapolis.

When an increase in creatinine met or exceeded the current marker of 0.5 mg/dL on day 1, 57.7% of patients died within 28 days. Mortality was 25.7% for patients with early increases of less than 0.2 mg/dL.

“The current definition may be too insensitive to detect acute kidney injury in patients with severe sepsis,” Dr. Macias said.

Relative serum creatinine increases that are greater than 25%—as well as acute increases of 0.5 mg/dL or greater—are associated with significant increases in mortality.

The researchers drew the patient population from placebo groups in the Integrated Database of Severe Sepsis and Xigris Therapy, a repository of data from trials for Lilly’s drotrecogin alfa activated (Xigris). The investigators were interested in patients with moderate increases of 0.2-0.49 mg/dL in serum creatinine be-

cause these are not currently associated with kidney injury.

“If you have increases from 0.2 to less than 0.5 [mg/dL], you have mortality of 40%” regardless of baseline level, Dr. Macias said. “If you have increases greater than 0.5 [mg/dL], you have mortality greater than 50%—no matter where they started.”

Deaths typically occurred within 5 days if creatinine levels rose on day 1. Patients with high baseline creatinine that did not rise tended to die after day 15, he said. ■

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