

Weekend Admission Ups Mortality in ESRD

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FROM THE ANNUAL MEETING OF THE AMERICAN SOCIETY OF NEPHROLOGY

DENVER – Patients with end-stage renal disease who were admitted to the hospital on a weekend were 17% more likely to die in the hospital than were those who were admitted on a weekday, results from a large retrospective analysis showed.

VITALS

Major Finding: In 2007, 8% of ESRD patients who were admitted to the hospital on a weekend died in the hospital, compared with 7% who were admitted on a weekday.

Data Source: A retrospective analysis of 836,550 cases from the Nationwide Inpatient Sample.

Disclosures: Dr. Sakhuja reported having no relevant financial disclosures.

Poor outcomes related to weekend hospital admission for many acute medical conditions have been described in the literature, “but not in patients with end-stage renal disease who are on dialysis,” Dr. Ankit Sakhuja said in an interview during a poster session at the meeting. “This population of dialysis patients is very fragile, because they get admitted much more frequently than the general population who are not on dialysis and they have much poorer outcomes than the general population. It becomes important to see how they do in different settings.”

Using the Nationwide Inpatient Sample, Dr. Sakhuja, an internal medicine resident at the Medical College of Wisconsin, Milwaukee, and his associates analyzed data from 836,550 patients with ESRD, at least 18 years old, who were admitted in 2007. The primary outcomes were all-cause in-hospital mortality and time to hemodialysis.

Of the total, 164,800 (20%) were admitted on a weekend. Dr. Sakhuja reported that roughly 8% of patients admitted on a weekend died in the hospital, compared with 7% of those who were admitted on a weekday, a difference that was statistically significant.

After adjusting for age, gender, race, other medical conditions, and hospital characteristics, the researchers found that patients admitted on a weekend were 17% more likely to die in the hospital compared with their counterparts who were admitted on a weekday. The study also found that patients admitted on a weekend experienced delays in the start of dialysis treatment by 0.29 days compared with those who were admitted on weekdays.

“As this is a retrospective study we cannot describe a causal relationship,” Dr. Sakhuja commented. “However, unavailability of dialysis facilities over weekends, especially on Sundays, and different staffing patterns over weekends in hospitals could be playing a role. The patients don’t tend to get less sick on the weekends. In fact, the seriousness of disease in patients admitted on weekends is higher.”

Dr. Sakhuja said that the findings underscore “the deficiencies in our current model of work in the hospitals where there is limited availability of both number of physicians and other accessory hospital staff and services.” He and his colleagues propose shift work and better incentives for hospital staff on the weekends to prevent this phenomenon.

He said that a prospective study is needed to confirm the findings and to determine other factors that affect this weekend effect in people with ESRD. ■

Normal-Weight Dialysis Patients Show Decreased Mortality Risk

FROM THE ANNUAL MEETING OF THE AMERICAN SOCIETY OF NEPHROLOGY

DENVER – Obese dialysis patients younger than age 65 years were 1.6 times more likely to die within 7 years, compared with their younger, normal-weight dialysis counterparts.

In addition, young and elderly dialysis patients alike who were underweight faced about a twofold increased risk of dying within the same time frame.

The findings come from the Netherlands Cooperative Study on the Adequacy of Dialysis (NECOSAD), a prospective analysis of 1,749 dialysis patients at 38 centers who were at least 18 years old at their first dialysis treatment and were followed until death, transplantation, or a maximum of 7 years.

“Mortality patterns of body mass index differ between young and elderly dialysis patients,” Dr. Ellen K. Hoogveen said during a press briefing at the meeting, where the findings of the analysis were presented.

“Obesity may be harmful in patients younger than 65 years. For patients younger than 65 years starting with dialysis, it is important to strive for normal weight.”

VITALS

Major Finding: Patients on dialysis who were younger than 65 years of age and obese had a 1.6-fold increased risk of dying within 7 years, compared with their normal-weight counterparts.

Data Source: An analysis of 1,749 dialysis patients in the Netherlands who were followed for 7 years.

Disclosures: One of the study authors, Dr. Elisabeth Boeschoten, is a consultant for Amgen and Baxter and receives grants/research support from Abbott, Amgen, Baxter, Genzyme, Roche, and Shire. All of the other authors reported no relevant financial disclosures.

At baseline, Dr. Hoogveen and her colleagues classified patients into one of two age groups: young (younger than age 65) and elderly (age 65 and older). They also classified them into one of four weight groups based on body mass index: underweight (less than 20 kg/m²), normal weight (20-25 kg/m²), overweight (26-30 kg/m²), and obese (higher than 30 kg/m²).

Cox regression analysis was used to calculate hazard ratios associated with BMI categories, with normal weight used as the reference category, according to the investigators.

Dr. Hoogveen, of the department of nephrology at Jeroen Bosch Hospital, Den Bosch, the Netherlands, reported that the mean age of the younger patients in the study was 51 years, while the mean age of the elderly patients was 73 years. The mean BMI of both the younger and the older groups was 24 kg/m², and more than half were men (62% in each group).

The 7-year mortality rate for all patients was 67%. When the researchers adjusted for age, gender, smoking, cardiovascular disease, and modality of dialysis, they found that younger patients who were obese at baseline

were 1.6 times more likely to die within 7 years than were younger, normal-weight patients. Elderly obese patients were 1.1 times more likely to die within 7 years than were younger, normal-weight patients, a statistically significant difference.

In addition, young and elderly dialysis patients alike who were underweight at baseline were at significantly increased risk of dying within 7 years, compared with younger patients who had a normal BMI (hazard ratios of 2.2 and 1.6, respectively). ■

Acute Kidney Injury Found in 28% of Cancer Patients

FROM THE ANNUAL MEETING OF THE AMERICAN SOCIETY OF NEPHROLOGY

DENVER – Over the course of 3 months, 28% of patients admitted to a major cancer hospital had clinical signs of acute kidney injury, results from a single-center analysis showed.

While the incidence of acute kidney injury is higher in hospitalized high-risk patients and has been shown to be directly associated with morbidity, mortality, and higher cost, “there is very little literature available about what happens to cancer patients admitted to the hospital,” lead study author Dr. Abdulla K. Salahudeen said in an interview during a poster session at the meeting. “Our

study suggests that we need to take measures to mitigate acute kidney injury in cancer patients.”

In what is believed to be the first study of its kind, Dr. Salahudeen and his associates reviewed the electronic medical records of 5,491 cancer patients who were hospitalized at MD Anderson Cancer Center, Houston, between May 1 and July 31,

2006. They obtained demographic information as well as laboratory and pharmacy data, and defined the incidence of acute kidney injury as having a rise in absolute serum creatinine of 0.3 mg/dL or greater.

Complete information was available on 5,013 of the 5,491 patients, explained Dr. Salahudeen, chief of the section of nephrology and director of the

dialysis unit at University of Texas MD Anderson Cancer Center, Houston.

The mean age of these patients was 55 years, 53% were male, and 72% were white. The researchers determined that 14% had preexisting acute kidney injury while another 14% developed the condition during their hospital stay.

On univariate analysis, the clinical risk factors significantly associated with acute kidney injury were use of antibiotics (odds ratio 2.06), use of IV contrast (OR 1.99), use of multiple antidiabetic agents (1.69), and use of chemotherapeutic agents (OR 1.38).

On multivariate analysis, clinical risk factors significantly as-

sociated with acute kidney injury were transfer to the ICU (OR 1.40), use of chemotherapeutic agents (OR 1.29), use of antibiotics (OR 1.30), and having diabetes (OR 1.06).

Multivariate analysis also revealed that patients who had acute kidney injury had higher rates of transfer to the ICU, (OR 1.44), mortality (OR 5.20), and length of hospitalization (OR 2.1), compared with their counterparts who did not have acute kidney injury.

“It is possible that what we are seeing is an association between severity of cancer and level of kidney injury,” said Dr. Salahudeen, who emphasized the preliminary nature of the study. ■

VITALS

Major Finding: Of patients admitted to a major cancer hospital over a 3-month period, 28% had clinical signs of acute kidney injury.

Data Source: A review of 5,013 cancer patients who were hospitalized at MD Anderson Cancer Center, Houston, between May 1 and July 31, 2006.

Disclosures: Dr. Salahudeen said that he had no relevant financial disclosures.