A new study has found that patients who underwent elective major urologic surgery were twice as likely as other surgical patients to be readmitted to the surgical intensive care unit (SICU). The most common cause of readmission was respiratory compromise, according to the study presented at the American Urological Association annual meeting.

The study is the first to examine SICU readmissions in a population of urology patients specifically. Mark Hockenberry, MD, Hospital of the University of Pennsylvania, and colleagues sought to determine factors associated with SICU readmission among patients undergoing major urological surgery.

The study involved 114 patients who were admitted to a SICU at an urban, academic medical centre following elective major urological surgery over a two-year period. Patients with a second SICU admission during the same hospital stay (readmitted group) were compared to those with only one SICU admission (non-readmitted group). Preoperative, intraoperative, and postoperative data were examined for each patient.

The research team reported these key findings:

- 9 patients (7.89 percent) were readmitted to the SICU with 1 patient (0.88 percent) readmitted twice. The SICU readmission rate for urology patients was twice that for non-urology patients during this time period (odds ratio 2.38, p=0.015).
- The most common causes of readmission were respiratory compromise (60 percent), haemodynamic instability (40 percent), and altered mental status (30 percent).
- During the initial SICU admission, there was one complication (11.11 percent) in the readmitted group compared with five complications (4.76 percent) and one death (0.95 percent) in the non-readmitted group.

In addition, the researchers note that an age-adjusted Charlson comorbidity index (CCI) higher than 5 was significantly associated with SICU readmission. Data analysis showed that patients with a CCI greater than 5 had a significant sixfold increased odds of readmission compared with those who had a CCI of 5 or less.

Based on the results, “protocols for improved transitions of care with the goal of decreasing SICU readmissions should include enhanced respiratory evaluations and focus on patients with a higher CCI,” the researchers conclude.

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