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Sepsis prevalence and associated hospital admission and mortality after ureteroscopy in employed adults

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Objective

To determine 30-day inpatient mortality, intensive care unit (ICU) admissions, inpatient admissions/readmissions, and yearly trends in sepsis prevalence and inpatient mortality after ureteroscopy (URS) in employed adults.

Materials and methods

We performed a retrospective analysis of the IBM MarketScan Commercial Database to identify employed adults aged 18–64 years who underwent URS between 2015 and 2019. Patients were categorised as having no sepsis (controls), non-severe sepsis, or severe sepsis within 30 days of URS. The main outcomes included inpatient mortality, ICU admissions, inpatient admissions, readmissions, and annual rates of sepsis and associated inpatient mortality.

Results

Among 109 496 patients undergoing URS, 5.6% developed sepsis (4.1% non-severe, 1.5% severe). The 30-day inpatient mortality rates were 0.03%, 0.3%, and 2.5% for controls, non-severe sepsis and severe sepsis, respectively ($P < 0.001$). In a multivariable analysis, diagnosis of sepsis regardless of severity (hazard ratio [HR] 17.2, 95% confidence interval [CI] 10.5–28.1; $P < 0.001$) or severe sepsis (HR 49.5, 95% CI 28.9–84.7; $P < 0.001$) increased the risk of 30-day inpatient mortality compared to no sepsis (controls). ICU admissions on the day of procedure (1.5%, 19.8%, and 52.4%), inpatient admission rates (18.3%, 74.9%, and 76.9%,) and readmission rates (7.1%, 12.0%, and 15.9%) were higher with severe sepsis and non-severe sepsis vs controls (all $P < 0.001$). During the study period, the prevalence of sepsis after URS increased from 4.7% to 6.6% ($P < 0.001$), while the associated mortality rate decreased from 0.7% to 0.2% ($P < 0.001$).

Conclusion

Among working adults aged 18–64 years, sepsis after URS increases the risk of 30-day inpatient mortality, ICU and hospital admission, and hospital readmission. Although the prevalence of sepsis after URS is increasing over time, associated mortality rates are declining. Urologists should be aware of the potentially deadly consequences of sepsis after URS in younger patients.



[Link to abstract](#)

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