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C linical significanceC linical significances of urinary obstruction in critically ill patients with urinary tract infections s of urinary obstruction in critically ill patients with urinary tract infections

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Objectives:

Urinary obstruction may be a complicating factor in critically ill patients with urinary tract infections (UTIs) and requires efforts for identifying and controlling the infection source. However, its significance in clinical practice is uncertain. This retrospective study investigated the overall hospital courses of patients in the intensive care unit (ICU) with UTIs from the emergency department.

Methods: Baseline severity was assessed by the Sequential Organ Failure Assessment (SOFA) score; outcomes included probability and inotropic-, ventilator-, renal replacement therapy (RRT)-, and ICU-free days and 28-day mortality.

Results: Of 122 patients with UTIs, 99 had abdominal computed tomography scans. Urinary obstruction was identified in 40 patients who had higher SOFA scores and lactate levels ($P = 0.006$ and $P < 0.001$). Patients with obstruction were more likely to require RRT and had shorter durations of RRT-free days (odds ratio 3.8; $P = 0.060$ and estimate −3.0; $P = 0.041$). Durations of ICU-free days were shorter, but it disappeared after adjustment for initial SOFA scores*(estimate* −2.3; $P = 0.147$). Impact of the timing of urinary drainage on outcomes was evaluated, demonstrating that an intervention within 72 hours shortened the duration of RRT-free days compared to that after 72 hours (estimate −6.0 days; $P = 0.034$).

Conclusions:

Urinary obstruction can be a complicating factor, resulting in a higher probability of RRT implementation and shorter durations of RRT- and ICU-free days in critically ill patients with UTIs. Furthermore, delayed intervention for urinary drainage may result in longer durations of RRT.