



Western Surgical Association 2020 Annual Meeting

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4:00pm – 6:15pm Pacific Time
– Virtual Meeting --

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22. ARE URINARY TRACT INFECTIONS RESPONSIBLE FOR ELDERLY GROUND LEVEL FALLS OR FOUND DOWN DIAGNOSES?

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Background: Elderly trauma patients are known to be at high risk for urinary tract infection (UTI) due in part to comorbidities and immobilization. Among the subset of elderly trauma patients who present after a ground level fall or a found down diagnosis, a urinary tract infection may be a frequent reason for the admission. We hypothesize that a high percentage of elderly trauma patients who present after falling or found down will have a UTI on admission.

Methods: We reviewed elderly trauma patients who presented after a ground level fall or found down diagnosis at a Level I trauma center over a four-year period to determine the rate of a UTI. Data were collected on patient characteristics, outcomes, and antibiotic use as well as on urinary analysis (UA) and urine cultures (UC) that were obtained in the first 48 hours after admission. Testing was sent at the discretion of the admitting team. A UTI was either defined as the presence of leukocyte esterase, nitrites, or at least 5 leukocytes per high power field on UA or greater than 100,000 colony-forming units of an organism on urinary culture. A sub analysis was conducted among patients 80 years or older.

Results: Of the 1,036 elderly patients reviewed after a ground level fall or found down diagnosis, 496 had a UA in during the first two days after admission with 47.6% male, mean hospital length of stay of 7.1 days, and a mortality rate of 7.7%. Of the 496 patients, 149 (30.0%) patients had positive UA with the majority (80.0%) given antibiotics subsequently. Among the 191 patients who had urine sent for culture during the first 48 hours 62 (32.5%) were positive. Patients with a positive UC were 29.0% male, had a hospital length of stay of 6.4 days, and a mortality rate of 6.5%. Fifty-two (83.9%) of these patients were treated with antibiotics. Among patients older than 80 years, the rate of positive UA and UC increased to 69.6% and 52.8%, respectively. These rates were significantly higher in patients 80 years and older compared to their younger counterparts (positive UA OR 5.34 [95% CI 3.53–8.08], $p < 0.01$ and positive UC OR 2.32 [95% CI 1.39–3.90], $p < 0.01$).

Conclusion: A high rate of elderly trauma patients who present after a fall or found down have a UTI. Often these patients do not have urine sent for UA or UC and if the results are suspicious for a UTI 1 in 5 do not receive antibiotics. Patients 80 years or older had higher rates of a positive UA or UC compared to those aged 65 to 79 years. Should an elderly trauma patient present after a fall or found down diagnosis a UA or UC and initiating early antibiotics may be indicated.