Pull the Foley: Improved Quality for Geriatric Trauma Patients Without Indwelling Catheters

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Purpose: Urinary tract infections (UTIs) are a common complication in geriatric orthopaedic trauma patients and are often presumed to be related to indwelling Foley catheters. To address this issue, our institution implemented a hospital policy beginning October 1, 2016 that prompts straight catheterization of trauma patients as the new standard of care, in lieu of indwelling Foley catheters. This study sought to compare rates of UTI, length of stay, and cost of inpatient care before and after implementation of this new policy to assess its effectiveness in elderly orthopaedic trauma patients.

Methods: Between September 1, 2014 and October 1, 2017, patients aged 55 years and older presenting with orthopaedic fractures to 1 academic medical center were identified. On admission, patient factors including age, gender, injury severity, fracture category (spine, pelvis, upper extremity, lower extremity, polytrauma), Charlson Comorbidity Index, preinjury ambulatory status, and use of an assistive device were collected. Patients were followed prospectively throughout hospitalization to assess health-care quality measures including development of UTI, length of stay, and total inpatient cost. Chi-square and Mann-Whitney U tests were used to assess differences in hospital quality measures before and after policy implementation. Regression analyses were then run to determine whether this hospital policy predicted a reduction in UTIs, length of stay, and inpatient cost after controlling for all patient factors.

Results: This study included 1509 patients with 1040 (68.9%) being hospitalized prior to and 469 (31.1%) after new policy implementation. The overall UTI rate was 6.2%, which decreased from 7.1% before to 4.1% after policy enactment ($P = 0.022$). There was also an associated decrease in median hospital length of stay from 4.0 days to 2.0 days following policy implementation ($P < 0.001$). After controlling for all patient factors, patients who were hospitalized following the implementation of the hospital policy had lower odds of UTI (odds ratio [OR]: 0.501, $P = 0.019$), a predicted reduction in length of stay by 1.7 days (slope coefficient [β]: –1.685, $P < 0.001$), and no difference in predicted inpatient cost ($P = 0.302$).

Conclusion: Terminating the use of indwelling Foley catheters in the elderly orthopaedic trauma population significantly reduced the odds of developing a UTI during hospitalization and predicted a significant reduction in length of stay. Institutions and providers that treat this patient population should recognize the benefits of implementing a policy that substitutes straight catheterization for indwelling Foley catheters.