

INCIDENCE OF FOLEY CATHETER RELATED URETHRAL INJURY IN A TERTIARY REFERRAL CENTER

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OBJECTIVES

Traumatic urethral catheterization may cause significant urethral injury and add to patient morbidity. We assessed the incidence and complications of catheter related urethral injury at our facility, in addition to the estimated costs of surgical intervention resulting from injury.

METHODS

This was an IRB approved retrospective review of electronic medical records and billing databases between the years 1998-2007 at a single institution. All patients were male and at least 18 years of age. ICD-9 codes and text descriptive identifiers were utilized to identify catheter related injuries. We subsequently identified those patients who had a diagnosis of UTI, bacterial cystitis, and/or septicemia-bacteremia within 2 weeks following urethral injury. Locations where the injuries occurred were identified, and these included the emergency department, inpatient wards, or the operating room. CPT codes were used to identify patients requiring any surgical procedures following the traumatic catheterization. A cost analysis was performed to estimate financial consequence of these surgical procedures.

RESULTS

A total of 3103 patients with Foley catheter related trauma were identified out of a calculated 221,045 catheters placed during the study period (1.4%). A subset of 100 randomly selected charts were individually reviewed to validate the accuracy of our method, and no discrepancies were found. The incidence of urinary tract infections, cystitis, and septicemia-bacteremia occurring within 2 weeks of urethral injury were 12.72%, 3.45%, and 1.90% respectively. The majority of traumatic catheterizations identified by location on chart review were initially encountered on the hospital ward (50%). The average nonprofessional hospital charges for inpatients at our facility with complications of cystitis, UTI, and septicemia were \$484, \$11,052, and 48,935 respectively. A total of 1,020 patients (32.87%) underwent a corrective surgical procedure following the urethral injury. Extent of surgical procedures ranged from cystoscopy with dilation of strictures to multi-staged urethroplasty. Estimated surgical procedure costs ranged from \$8,000 to \$17,000, related to the extent of surgical procedures required. Cost did not include hospital stay. No significant relationships were found between where in the hospital the injuries occurred and extent of surgical procedures required.

Table 1. Summary of 3,101 patients with Foley catheter related trauma

| Complication | % of patients | Cost |
|-----------------------|---------------|--------------------|
| UTI | 12.72% | \$11,052 |
| Cystitis | 3.45% | \$484 |
| Septicemia | 1.90% | \$48,935 |
| Surgical intervention | 32.87% | \$8,000 - \$17,000 |

CONCLUSION

Foley catheter related urethral injury is uncommon, but frequently results in substantial morbidity and financial costs. To our knowledge this is the first report to characterize the frequency and cost of catheter related trauma.



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