

P2734 An assessment of surgical prophylaxis in transurethral resection and risk of post-operative infection: a retrospective multi-centre study

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Background:

Endoscopic urological procedures are associated with an increased risk of infection. Evidence-based guidelines published jointly by the American Urological Association, the American Society of Health-System Pharmacists, the Infectious Diseases Society of America, the Surgical Infection Society and the Society for Healthcare Epidemiology of America, outline best practice for surgical prophylaxis.

The aim of our study was to evaluate surgical prophylaxis (timing and antibiotic dosing) for transurethral resection of prostate (TURP) and assess the risk of post-operative infection. A secondary aim was to establish compliance with evidence-based guidance and promote effective antimicrobial stewardship.

Materials/methods:

A retrospective multi-centre analysis was performed

over a 12-month period (January to December 2017). Patients undergoing TURP at two large University teaching Hospitals were identified using our electronic based records systems.

Surgical prophylaxis was assessed for each patient. Each case was reviewed for any post-operative complications (e.g. symptomatic UTI, bacteraemia) and other adverse event. The rate of post-operative infection for the study population was calculated and compared to TURBT for which surgical prophylaxis is not routinely recommended.

Results:

297 patients were identified over the one-year study period, with 144 patients undergoing a TURP and 153 undergoing a TURBT.

Of the TURP cases, 99% (140/142) of patients received Gentamicin as prophylaxis, with only 5% (7/142) receiving the recommended 5mg/kg dose. In only 37% (52/142) of cases prophylaxis was given within the 60 mins prior to the procedure starting.

A statistically significant difference in the incidence of post-operative UTI was demonstrated (Fishers exact Test; $p=0.0001$); 50 (35%) of TURP cases compared to 8 (5%) of TURBT cases. The 30-day mortality rate for the study population was 0%.

Conclusions:

Our study suggests poor compliance with evidence-based guideline recommendations. Antibiotic dosing and timing of administration were found to be suboptimal and associated with a significant rate of post-operative UTI.

These findings prompted the development of updated local guidance and integration of a surgical prophylaxis checklist. The judicious use of antibiotic therapy is important not only to improve clinical outcome and reduce patient risk, but also potentially reduce the selection for antibiotic resistance.

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