Investigation of the patient outcomes for Transurethral Resection of Prostate (TURP) patients receiving antithrombotic therapy

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Introduction
TURP is amongst the most common urological procedures, over 2,700 were performed in NSW (population 6 million) in 2007. At the time of commencing this study, the effect of the rising proportion of men taking either Antiplaetlet (AP) or Anti-Coaugulant (AC) drugs for primary or secondary prevention of Thromboembolic Events on TURP outcomes had not been well characterised in the literature1.

Aim
To describe the effect of AP and AC drugs on the patient outcomes of TURP. Specifically to quantify the effect on morbidity (for example: infection, DVT/PE, CVA, AMI) and on healthcare usage (for example: length of stay, rate of presentation to Emergency within 28 days, and rate of unplanned re-admission within 28 days).

Methods
A retrospectively collected cohort study was constructed using the data recorded prospectively during the patients' original admission. The medical records of patients were examined by the first author and a standardised Case Report Form filled out on each participant. In order that the results be generalisable, one-year samples were taken from 4 NSW public hospitals (Concord, Gosford and Wyong, Prince of Wales, Royal Prince Alfred). All work was conducted in accordance with NH&MRC guidelines on the ethical conduct of research.

Patients were divided into groups based on different characteristics. Principal divisions included:
- Patients taking AP or AC drugs prior to their TURP (Study Group).
- Those who had their medication ceased prior to surgery (Cease).
- Those who either continued on AP or AC or who had bridging AC in the peri-operative period (Continue).

Secondarily, patients were also divided based upon:
- Patients with Prostate Cancer (PCa Group).
- Patients with Benign Prostatic Hypertrophy (BPH Group).
- Patients not routinely taking AP or AC (Controls).

Sample size calculations were based on demonstrating a difference of one day in the Length of Stay (LOS) between the Study Group and the Controls. This was calculated at 330 participants.

Data was analysed using Microsoft Excel and SAS.

Results
A total of 448 potential participants were identified, of whom 423 met the inclusion criteria. This was divided as follows:
- Control Group: 253
- Study Group: 170
- Cease: 150
- Continue: 20
- BPH Group: 362
- PCa Group: 61

There were statistically significant differences in the demographic and comorbidity profiles between the groups.

The principal differences between the groups included:

- **Length of Stay of groups in days.**

<table>
<thead>
<tr>
<th>Group</th>
<th>Days</th>
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<tbody>
<tr>
<td>Controls</td>
<td>3.7</td>
</tr>
<tr>
<td>Study Group</td>
<td>4.4</td>
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<tr>
<td>Cease</td>
<td>3.6</td>
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<tr>
<td>Continue</td>
<td>4.6</td>
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<tr>
<td>BPH Group</td>
<td>5.6</td>
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<tr>
<td>PCa Group</td>
<td>4.6</td>
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Statistically significant differences were found between most of these outcome parameters except with relation to the Continuing group (likely owing to the sample size). For practical purposes differences in LOS of greater than 0.5 days are equal to 1 bed day.

Also notable was that the operations performed on the Study Group involved the removal of significantly less tissue (21.6g versus 25.6g) and were shorter (61 min versus 75 minutes) but resulted in longer periods of post-operative bladder irrigation (45.4 hours versus 42.9 hours).

Conclusions
There is a significant difference in the morbidity and healthcare service usage between the groups. This is consistent with findings from other studies2-3. Whilst this study does not ascribe causality to the AP and AC drugs, it does highlight that there is a need to plan TURP models of care in a way which recognises the differences between these groups, especially in an era of activity based funding.

References
3. Taylor K et al “A retrospective study to assess the morbidity associated with transurethral prostatectomy in patients on antiplatelet or anticoagulant drugs” BJU Int (2011) 108:45-50

Acknowledgements
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Poster presentation sponsor