The safety of overnight hospitalization for transurethral prostatectomy: a prospective study of 200 patients

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Record Status
This is a critical abstract of an economic evaluation that meets the criteria for inclusion on NHS EED. Each abstract contains a brief summary of the methods, the results and conclusions followed by a detailed critical assessment on the reliability of the study and the conclusions drawn.

Health technology
Early catheter removal and hospital discharge (one-day stay) after transurethral prostatectomy (TURP).

Type of intervention
Treatment.

Economic study type
Cost-effectiveness analysis.

Study population
Patients undergoing transurethral prostatectomy (TURP).

Setting
Hospital. The economic study was carried out in California, USA.

Dates to which data relate
The effectiveness and resource use data were collected between 1992 and 1994. The price year was not clearly reported.

Source of effectiveness data
Effectiveness data were derived from a single study.

Link between effectiveness and cost data
The costing was not undertaken on the same patient sample as that used in the effectiveness analysis.

Study sample
A total of 200 patients was included in the study; no power calculations were reported. For 156 of those patients the catheter was removed on postoperative day 1 (Day 1 Group), whereas for 44 patients the catheter was removed after day one (After Day 1 Group).

Study design
This was a cohort study conducted in a single centre. The duration of follow-up was 30 days after hospital discharge and no loss to follow-up was reported.
Analysis of effectiveness
The principle (intention to treat or treatment completers only) used in the effectiveness analysis was not specified. The primary health outcome used in the analysis was the incidence of complications, and rehospitalizations. The percentage of cases being discharged with the catheter indwelling was also reported. The Day 1 group were two years younger (70.8 versus 72.8 years) and had 12 gm less resected tissue (26 versus 38 gm), on average, than the After Day 1 group.

Effectiveness results
Twenty-six (17%) and four (2.6%) patients had urinary retention and bleeding problems requiring re-catheterization, respectively, in the Day 1 group. The After Day 1 group had corresponding figures of 10 (22.7%) and 1 (2.2%) patients, respectively. The percentage of patients discharged with a catheter was 10.9% and 27.5% in the Day 1 group and the After Day 1 group, respectively. After discharge, the incidence rates of urinary retention and clot retention problems were 1.9% each, for the Day 1 group, and 4.5% and 2.3%, respectively, for the After Day 1 group. The rates of rehospitalization were 1.3 and 4.5% in the Day 1 group and the After Day 1 groups, respectively. One death, from the former group, was reported.

Clinical conclusions
The study revealed that a shorter length of stay did not lead to greater complication rates for postoperative bleeding, urinary retention or sepsis.

Measure of benefits used in the economic analysis
No summary benefit measure was identified in the economic study and only separate clinical outcomes were reported.

Direct costs
The resource utilisation was not reported separately from the costs. The cost items were not reported separately from the costs. The estimate of length of hospital stay associated with the comparator was not given, although it was reported as being based on Medicare data for the US in 1994. Hospitalization costs were measured. The perspective adopted in the cost analysis was not explicitly reported. The methodology and sources employed in calculating per diem unit costs were not reported, and nor was the price date.

Indirect Costs
Not considered.

Currency
US dollars ($).

Sensitivity analysis
No sensitivity analysis was performed.

Estimated benefits used in the economic analysis
Not applicable.

Cost results
The length of hospital stay associated with early catheter removal (at 1 day postoperatively) was 1.4 days, whereas the average for all patients in the study was 1.6 days. The authors reported that, assuming per diem costs of $850 and 147,300 transurethral prostatectomies performed per year, >cost savings of more than $125 million is possible< with the policy of early catheter removal after TURP.
Synthesis of costs and benefits
Cost and benefits were not combined as early catheter removal after TURP was the dominant strategy.

Authors' conclusions
Overnight hospitalization after TURP is an appropriate, safe, and cost-effective, patient care pathway, which uses techniques familiar to all urologists and nursing staff at community hospitals. Most patients undergoing TURP in a community hospital setting can be safely discharged home without an indwelling catheter after an overnight hospital stay.

CRD COMMENTARY - Selection of comparators
A justification was given for the choice of the comparator. It was the traditional patient management practice for patients undergoing TURP in the authors' setting. You should consider whether this is a widely used practice in your own setting.

Validity of estimate of measure of benefit
The internal validity of the study results is questionable due to the study design employed, which may have given rise to selection biases. The length of follow-up used (one month after hospital discharge) might be inappropriate for measuring the effectiveness of the strategies in question.

Validity of estimate of costs
The resource utilisation was not reported separately from the costs. The cost analysis was very limited in scope, and lacked information regarding the length of hospital stay associated with the comparator. The per diem cost figures used in the analysis were not associated with any particular date or source, being based on the authors' assumptions. The results associated with the cost analysis were not properly reported.

Other issues
Given the absence of randomisation, sensitivity analysis, and statistical analysis, the results need to be treated with some caution. The conclusions were not justified given the uncertainties in the data. The issue of generalisability was addressed simply by implying that the techniques used in the study are common to all community hospitals.

Implications of the study
Further studies involving all relevant comparators and appropriate study designs are needed before any valid statement can be made regarding the cost-effectiveness of TURP with early catheter removal.

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