

A COST-CONSEQUENCES ANALYSIS OF PHYSIOTHERAPY AND SURGERY FOR STRESS URINARY INCONTINENCE

Hypothesis / aims of study

The efficacy of pelvic floor muscle training by physiotherapists for stress urinary incontinence has been demonstrated in RCTs but data on the outcomes and costs of physiotherapy in clinical practice is lacking. The aim of this study was to conduct a cost-consequences analysis comparing the costs and outcomes of physiotherapy and surgery for stress urinary incontinence (SUI) based on Australian data.

Study design, materials and methods

We conducted a multi-centre observational study of management of SUI involving continence-trained physiotherapists in private practice and hospitals in all states of Australia. Physiotherapy treatment involved pelvic floor muscle training and any adjunctive therapy as indicated. Outcomes were measured using standard instruments (diary of incontinent episodes, stress test, quality of life (King's Health) questionnaire pre-treatment, at end of treatment and at one year. The number of treatments in an episode of care and adverse events were recorded for each subject. Surgical outcomes for Colposuspension were obtained from a number of primary Australian sources cited by Lapitan .[1] Surgical QoL outcomes were obtained from a non-Australian source. [2]

We used a 'bottom-up' approach for estimating costs. Private physiotherapy cost data were supplied by the participating practitioners. Hospital-based physiotherapy costs, surgical costs for colposuspension and costs of investigations were obtained from National Cost Data Collection 1999-2000 and Medical Benefits Schedule. Intangible costs (such as costs associated with pain and suffering) and the costs of managing the complications from surgery were not included in the calculation.

Results

39 physiotherapists in 35 centres (22 private practices, 17 hospital departments/community centres) recruited and treated 274 subjects with at least once weekly symptoms of SUI and a positive stress test, but without symptoms of overactive bladder. The results of outcomes, costs and complications are presented in Table 1 with comparative outcomes and costs for surgery. Subjects in the physiotherapy study had more mild incontinence at baseline than in two of the comparative surgical studies. Comparable objective rates of cure and changes in QoL were reported at end of treatment and after surgery. No adverse events were reported for physiotherapy compared with complications in 26.5 % of surgical patients. At one year, 73% of those who completed the physiotherapy training program were still 'satisfied' or 'very satisfied'. In total, 5.5% of subjects who were able to be followed up 'failed' physiotherapy treatment and proceeded to surgery. Physiotherapy involved 5 (mean) treatments in an episode of care. Costs for physiotherapy were less than one tenth the costs of colposuspension.

Interpretation of results

Physiotherapy appears to be an effective treatment for SUI when compared with colposuspension, with lower risk and at less than one tenth the cost of surgery.

Concluding message

From a health economics perspective, these results suggest that physiotherapy should be routinely implemented before consideration of surgery. This information has important economic implications for planning future health services.

[1] Open retropubic colposuspension for urinary incontinence in women. The Cochrane Library Issue 1, 2004.

[2] A comparison of objective and subjective outcomes of colposuspension for stress incontinence in women. Br J Obstet Gynecol 2001;108:408-413.

[3] Laparoscopic versus open colposuspension: a prospective multicentre randomised

single-blind comparison. NeuroUrol&Urodynam 2000;19(4):389-91.
 [4] A five year prospective randomized urodynamic study comparing open and laparoscopic

	Physiotherapy	Surgery
Baseline characteristics	n=274	
Age (mean SD)	47(11)	51.5 ^[3]
BMI (mean SD)	25(5)	29.6 ^[3]
Parity (mean)	2.4	2.7 ^[3]
% subjects with prior repair or continence surgery	11%	39% ^[2]
Baseline severity		
Incontinence Impact (King's Health Questionnaire)	median 67 (33-67: 25-75th centiles)	median 100 (66-100: 25-75th centiles) ^[2]
Mean no. leaks per day	1.4 (SD14)	12.5 ^[4]
Outcomes		
Objective	Stress test: 84% cure (end of treatment)	Urodynamic cure:69-80% ^[3]
QoL (King's Health Q)	Change from baseline to end of treatment and at one year p<.0001 in all domains	Change baseline to follow-up 6-12 months after surgery p<.0001 in all domains ^[2]
Incontinent episodes per day after treatment (mean)	0.4 (SD 0.4)	1 ^[2]
Satisfaction	at one year: 73% of those followed up 'satisfied' or 'very satisfied'	at 6 months: 89-94% 'high satisfaction' ^[3]
Costs		
Direct		
Treatment [based on mean (range) 5 (2-14) treatments]	A\$230 (private practice)/ A\$265 (hospital)	A\$3329 (DRG NO6Z :Female Reproductive System Reconstructive Procedure)
Investigations		
MSU	A\$90	A\$90
Urodynamics	n/a	A\$333
Indirect costs		
Weeks of lost earnings	0	2.5-3.1 ^[3] (based on time to return to normal activities)
Complications / failures	Nil complications reported 24% did not complete treatment at end of treatment:1.8% 'failed' > surgery at one year: another 28% lost to follow-up 3.7% 'failed' > surgery	6 months post-op ^[3] post-op rectocele 13% De Novo overactive bladder 6.5% voiding difficulty 7%

Table 1. Outcomes, costs and complications of physiotherapy and surgery

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