

**QUANTIFYING THE NATURAL HISTORY OF POST RADICAL RETROPUBLIC PROSTATECTOMY INCONTINENCE USING OBJECTIVE 1 HOUR PAD TEST DATA.****Hypothesis / aims of study**

Urinary incontinence (UI) following RRP is a well- recognized risk of the surgery. In most patients post-operative UI improves over time. To date, there is limited objective, quantitative data on the natural history of the resolution of post RRP UI. The purpose of this study was to define the natural history of post radical prostatectomy incontinence using an objective quantitative tool, a 1-hour standard pad test.

**Study design, materials and methods**

This is a prospective collection of 1-hour pad test data from 203 consecutive patients that had undergone Radical Retropubic Prostatectomy between March 1998 and August 2003. A standardized test was administered at subsequent postoperative clinic visits. Patients were evaluated: at 2 weeks (catheter removal), 6 weeks, 18 weeks, 30 weeks, 42 weeks and 54 weeks. The gram weight of urine loss was recorded and categorized into four groups defined according to the grams of urine loss: minimal ( $\leq 1$ g), mild ( $>1$ ,  $<10$ g), moderate (10-50g) and severe ( $>50$ g). The data set was analyzed for average urine loss by all patients at each time point, grams of urine loss at each time point, the percentage of patients and the distribution of patients in each category.

**Results**

203 patients were evaluated. Mean follow up was 118 weeks. The results of our findings are clearly documented in the following chart.

	$\leq 1.0$ g	1.1-9.9 g	10.0-49.9 g	$>50.0$ grams	Avg urine loss
2 weeks	3%	23%	50%	24%	36.7g
6 weeks	37%	23%	26%	14%	21.9g
18 weeks	66%	22%	8%	4%	5.6g
30 weeks	85%	9%	4%	2%	2.6g
42 weeks	87%	8%	3%	2%	2.8g
54 weeks	91%	5%	3%	1%	1.72g

**Interpretation of results**

There was linear improvement over the course of one year. While the majority of patients experience mild to severe UI immediately following catheter removal, there is a rapid decrease in leak volume during the first 18 weeks following RRP. Patients continue to improve out to 1 year with greater than 90% having minimal leakage by ICS criteria. These data are consistent with reported rates of continence recovery based upon subjective or "pad utilization" criteria.

**Concluding message**

The confirmation of this objective pad test consistent with previously published subjective continence recovery rates yields a reproducible tool that can readily be implemented into clinical practice. Objective real time information regarding the degree of incontinence can assist the patient and physician in care management.