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PREDICTING CONTINENCE RECOVERY AFTER RADICAL RETROPUBIC PROSTATECTOMY (RRP) USING QUANTITATIVE 1 HOUR PAD TEST DATA.

Hypothesis / aims of study

Transient urinary incontinence (UI) occurs in the majority of patients following RRP. The literature suggests that over time approximately 90% of patients will have resolution of this complication. However, the time course of resolution is variable and to date it has not been possible to distinguish those patients with delayed resolution from those in whom UI will persist. Most urologists wait 12 months prior to instituting active treatments for UI. The ability to identify patients unlikely to regain continence, at an earlier point in the post-operative period, would facilitate patient management. The purpose of this study was to determine if a 1-hour standard pad test at a specific post-operative time interval can provide information to predict continence recovery at one year.

Study design, materials and methods

The study was designed to prospectively quantify post prostatectomy urine loss and utilize the information gathered to generate a nomogram for predicting continence recovery.
203 consecutive patients underwent RRP by a single surgeon between 03/98 & 08/03. A standardized 1-hour pad test was administered at subsequent postoperative clinic. The data set was analyzed for grams of urine loss at each time point, the number of patients and the distribution of patients in each category. The data at 2,6,18,30 & 42 weeks were matched to the corresponding week 54 data. The gram weight of urine loss was recorded and categorized into four groups defined according to the grams of urine loss: minimal (≤1g), mild (>1, <10g), moderate (10-50g) and severe (>50g). Patients were evaluated: at 2 weeks (catheter removal), 6, 18, 30, 42 and 54 weeks. For each volume group at a given point in time, the percent of patients achieving continence at one year was calculated from their paired 54 week data.

Results

203 patients were evaluated. Mean follow up was 118 weeks. The percentages of patients achieving continence of 1gram or less for a given pad weight at specific postoperative time intervals are documented in the following chart.

Percentage of Patients Achieving Continence

	</=1.0 g	1.1-9.9 g	10.0-49.9 g	>50.0 grams
2 weeks	100%	90%	80%	83%
6 weeks	100%	89%	81%	65%
18 weeks	100%	88%	54%	33%
30 weeks	100%	71%	33%	11%
42 weeks	99%	55%	0%	0%

Interpretation of results

One-hour pad test volumes predict for the probability of long-term continence recovery. Low volume leakage is associated with a high probability of continence recovery irrespective of time. Patients with moderate leak volumes beyond 18 weeks have a 33% probability of continence at one year. Patients with severe leakage beyond 18 weeks have an 11% likelihood of continence at one year.

Concluding message

Post prostatectomy incontinence, no matter the degree, is quite shocking to the vast majority of patients. Objective evaluation of their pad test weights can be a helpful clinical tool to manage the expectations of the patient. Those with lesser volumes can be reassured that they stand a good chance of continence recovery while those with severe leakage documented as early as 18 weeks may benefit from earlier implementation of active therapy.