

Author(s)	G.S. Steele, M.P. Sullivan, S. Alva, S.V. Yalla
Institution, city, country	Veterans Affairs Medical Center, Harvard Medical School, Boston, MA USA

Title (type in CAPITAL LETTERS, leave one blank line before the text)

ALTERATIONS IN DETRUSOR CONTRACTILITY AND OUTLET PROPERTIES FOLLOWING RADICAL RETROPUBIC PROSTATECTOMY.

Aim of this study. Incontinence from radical retropubic prostatectomy (RRP) has been reported to occur in 2% to 87% of patients, and is generally believed to be due to bladder dysfunction, sphincter dysfunction or a combination of these 2 factors. Some studies have shown a decrease in detrusor compliance following RRP. In view of the various factors that may play a role in post RRP incontinence, we analyzed urodynamic studies from patients who underwent RRP to determine the differences in urodynamic findings between continent and incontinent patients.

Methods. Comprehensive video-urodynamic studies were performed between five and 24 months postoperatively in 33 patients who underwent radical retropubic prostatectomy. The following parameters were recorded: cystometric capacity, bladder compliance, maximum isometric contraction pressure (P_{isv}), maximum voiding pressure during steady flow state ($P_{detmaxSF}$) and post residual volume (PVRV). Post RRP bladder outlet obstruction was defined as $P_{detmaxSF} > 50 \text{ cm H}_2\text{O}$. The patients were divided into 2 groups: incontinent patients ($n = 17$) and continent patients ($n = 16$), i.e. those patients who claimed to be dry and who wore no protection.

Results: The urodynamic data for the two groups are shown in the table: (* $p = < 0.05$).

	P_{isv} (cm H ₂ O)	$P_{detmaxSF}$ (cm H ₂ O)	Capacity (ml)	PVRV (ml)	Compliance (ml/cm H ₂ O)
Incontinent patient (±SD)	86.5 (29)	50.5 (18)*	340 (109)	55 (74)	26 (9)*
Continent Patients (±SD)	80.2 (30)	71.8 (30)*	453 (223)	117 (56)	39 (14)*

Six (35%) patients in the incontinent group and 11 (69%) patients in the continent group had bladder outlet obstruction at the site of anastomosis. Both $P_{detmaxSF}$ and compliance were significantly higher in the incontinent group (65%) than in the continent group (13%). P_{isv} was not significantly different between groups. Detrusor instability was present in 8 (47%) incontinent patients and in 8 (50%) continent patients.

Conclusion: This study suggests that some degree of outlet obstruction at the site of the anastomosis together with preservation of compliance may contribute to maintaining continence after RRP. The presence of a critical degree of outlet resistance after RRP may augment the distal sphincter mechanism, provided that the remainder of the distal sphincter is intact.