

## DO PELVIC FLOOR MUSCLES STRENGTH AND URODYNAMIC PARAMETERS PREDICT EARLY INCONTINENCE OUTCOMES AFTER RADICAL RETROPUBIC PROSTATECTOMY?

### Hypothesis / aims of study

Urinary incontinence (UI) is a fearsome complication after radical retropubic prostatectomy (RRP), impacting on quality of life (QoL). Identification of UI predictors is paramount considering that it could aid treatment decision-making.

This paper suggests that aging seems to be associated with increasing of urinary incontinence risks after radical prostatectomy. Patients with weakness of PFM in pre operative were associated with increase of urinary incontinence after surgery, showing there is a protector effect of pelvic floor muscle strength against UI. The aging increase the risk of urinary leak after radical prostatectomy, and, in pre operative period, this information should be sharing with patients before the treatment of their prostate cancer. It seems that urodynamic parameters are not a predictive factors for urinary incontinence after radical prostatectomy, however, furthermore studies are necessary to confirm this fact

### Study design, materials and methods

130 patients undergoing RRP were prospectively studied. The following parameters were assessed pre and 1 month postoperatively: incontinence symptoms and Quality of Life (QoL) were evaluated by ICIQ-SF questionnaire validated in Portuguese; 60-minute Pad Test; and pelvic floor muscle (PFM) strength was assessed using perineometer (PerinaStim) and electromyography (EMG). In preoperative, the follow urodynamic parameters were studied: free maximum urinary flow (Qmax), maximum detrusor pressure (Pdet.max), post-voiding residual volume, first sensation of bladder filling, bladder compliance and cystometric capacity. Prostate weight was measured just after surgery. 60-minute Pad Test was used to UI diagnosis.

### Results

Mean age was 57 ( $\pm 5,7$ ) years old. Tumor was organ-confined in 79% of patients and only 11% were high risk. The age of patients with UI 1 month after surgery were significantly higher compared to continent (58,49  $\pm 5,87$  versus 56,30  $\pm 5,26$  years,  $p=0,041$  respectively). In urodynamic parameters, no statistical difference was observed when compared continents patients in comparison to incontinents 1 month after surgery (Table1). When the multivariate backwards-logistic regression analysis was performed, we observed that the higher PFM strength had significantly associated with a decrease in the risk of UI (OR=0,986 IC: 0,974-0,998,  $p=0,018$ ) and older patients were associated with an increased risk of UI (OR=1,078 IC: 1,007-1,154,  $p=0,03$ ).

### Interpretation of results

This paper suggests that aging seems to be associated with increasing of urinary incontinence risks after radical prostatectomy. Patients with weakness of PFM in pre- operative were associated with increase of urinary incontinence after surgery, showing there is a protector effect of pelvic floor muscle strength against UI. The aging increase the risk of urinary leak after radical prostatectomy, and, in pre-operative period, this information should be sharing with patients before the treatment of their prostate cancer. It seems that urodynamic parameters are not a predictive factors for urinary incontinence after radical prostatectomy, however, furthermore studies are necessary to confirm this fact.

### Concluding message

Older patient and pelvic floor muscles weakness had associated with UI 1 month after radical prostatectomy. Urodynamic parameters had not correlated with UI one month after surgery.

Urodynamic parameters	GROUPS		p value
	Continents (n=43)	Incontinents (n=85)	
Qmax	13,07 ( $\pm 6,76$ )	11,94 ( $\pm 6,16$ )	$p > 0,05$
PVR	40 (0-480)	10 (0-400)	$p > 0,05$
CC	421,84 ( $\pm 113,93$ )	435,82 ( $\pm 127,16$ )	$p > 0,05$
BC	39 (9-156)	40 (9-435)	$p > 0,05$
Pdet.max	53,35 ( $\pm 23,55$ )	49,93 ( $\pm 17,90$ )	$p > 0,05$
1st BF	178,81 ( $\pm 87,94$ )	189,54 ( $\pm 94,70$ )	$p > 0,05$

Qmax: free maximum urinary flow; PVR: post-voiding residual volume;

CC: cystometric capacity; BC: bladder compliance; Pdet.max: maximum detrusor pressure; 1st BF: first sensation of bladder filling

Disclosures

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**Ethics Committee:** Ethical Committee of Barretos **Helsinki:** Yes **Informed Consent:** Yes