Pelvic floor muscle training reduces erectile dysfunction and climacturia one year after open and robot radical prostatectomy: a randomized controlled trial.

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Objectives

To determine whether patients, with remaining erectile dysfunction (ED), minimum 12 months after radical prostatectomy (RP), experienced a better recovery of erectile function (EF) with pelvic floor muscle training (PFMT).
To investigate the effect of PFMT on climacturia.

Background

ED remains a significant problem for 19-74% of men undergoing a nerve sparing RP.[1]
Only one RCT was reported regarding the effect of ED after RP, indicating improved EF. PFMT was however started immediately after catheter removal, without taking into account a period of spontaneous recovery of EF.[2]

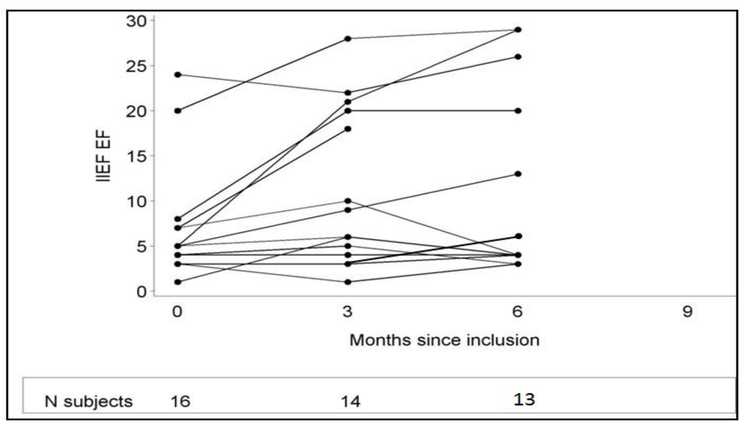
Methods

- Evaluation of ED/ climacturia:
  - International Index of Erectile Function (IIEF)/ interview (yes/no)
- Inclusion criteria
  - 33 patients, who underwent ORP/RALP and were closely followed in previous research[3]
  - Suffering from ED, min. 1 yr after RP
- Exclusion criteria
  - Remaining urinary incontinence
  - No female partner
  - Preoperative IIEF-EF score ≤12
  - IIEF-EF score >24 at time of inclusion
  - Post-RP radiation therapy
  - Non-nerve sparing RP
  - No interruption of other erectile aids
- Treatment group (T): started PFMT immediately at inclusion; control group (C): started PFMT 3 months later
- Statistical analysis of differences between groups at 3 months: Mann Whitney U test, Fisher's exact test

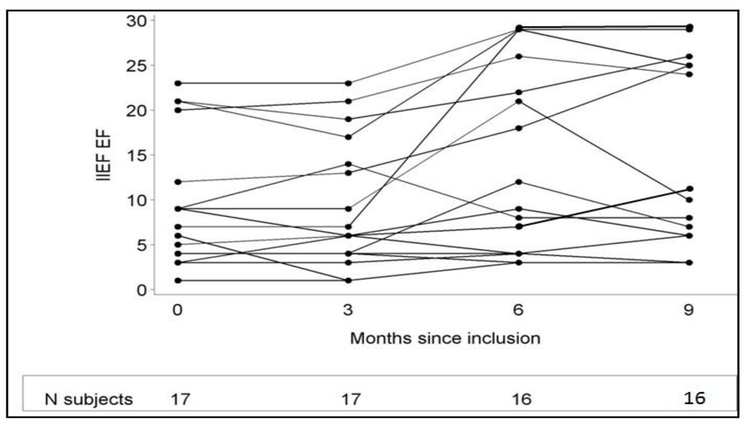
Results

- Thirty-three patients were included: N=17 (T), n= 16 (C)
- Mean age (T) 61.1 years (SD 5.8), (C) 61.5 years (SD 7.3); in (T) and (C), respectively 81% and 65% underwent an open RP and 19% and 35% a robot RP. Mean preoperative IIEF-EF was 26.9 (SD 3.8) in (T) and 23.8 (SD 6.8) in (C). Mean IIEF-EF score at inclusion was 6.7 (SD 6.3) in (T) and 9.5 (SD 7.3) in (C).
- At 3 months after starting PFMT, (T) had a significantly better EF than (C) (p=0.025) (Figure 1a/1b).
- Other subdomains of the IIEF, like orgasmic function, sexual desire, intercourse satisfaction and overall satisfaction remained the same.
- At 3 months after starting PFMT, a significantly higher percentage of patients in (T) showed an improvement regarding climacturia (p=0.004) (Table 1).

Figure 1a/1b Individual evolution of erectile function over time for the treatment and control group



1a



1b

Table 1 Number (percentage) of patients suffering from climacturia at each time-point

	Treatment group (N=16)	Control group (N=17)
0 months	9/16 (56%)	7/17 (41%)
3 months	3/14 (21%)after PFMT	8/17 (47%)
6 months	4/14 (29%)	2/16 (12%) after PFMT
9 months		4/16 (25%)

* Fisher's exact-statistics (p=0.004), indicating the difference in proportion of patients with climacturia between (T) and (C) at 3 months.

Conclusion

- Patients, minimum 12 months after RP, with remaining ED, experienced a better recovery of EF with PFMT compared to patients without PFMT.
- PFMT had a beneficial effect on climacturia.

1. Ficarra et al. Systemic review and meta-analysis of studies reporting potency rates after robot-assisted radical prostatectomy. Eur Urol 2012; 62:418-30; **2.** Prota et al. Early postoperative pelvic-floor biofeedback improves erectile function in men undergoing radical prostatectomy: a prospective, randomized, controlled trial. Int J Impot Res 2012; 24: 174-8; **3.** Geraerts et al. Influence of preoperative and postoperative pelvic floor muscle training (PFMT) compared with postoperative PFMT on urinary incontinence after radical prostatectomy: a randomized controlled trial. Eur Urol 2013; 64:766-72.

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