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Prostate Cancer

Preserved Postoperative Penile Size Correlates Well With Maintained Erectile Function After Bilateral Nerve Sparing Radical Retropubic Prostatectomy

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Abstract

Background: Controversial data on penile length after radical retropubic prostatectomy are available.

Objective: To determine whether postoperative penile size correlates to erectile function following bilateral nerve-sparing radical retropubic prostatectomy (BNSRRP).

Design, Setting and Participants: Thirty-three consecutive patients with a preoperative erectile function domain of the International Index of Erectile Function (IIEF-EF) score indicating full potency (≥ 26) were prospectively enrolled at a single tertiary academic Center.

Intervention: All patients underwent BNSRRP performed by one high-volume surgeon.

Measurements: All patients were preoperatively evaluated by IIEF-EF, analysis of comorbidities, physical examination, and penile power colour Doppler ultrasound using intracavernosal injection of prostaglandin E(1) (PGE(1)) 20 mug plus audiovisual and manual genital stimulation. Penile length and circumference were measured in flaccidity and at maximum erection. Six months postoperative, patients were assessed with the same protocol plus general assessment questions investigating penile structure and function. Statistical analysis was performed with an independent sample t test.

Results and Limitations: Mean patient age was 56.5 yr. We found no difference between the preoperative and the 6-mo postoperative mean IIEF-EF domain score (27.2 vs. 26.7, respectively; $p = 0.35$). No difference was found in penile colour Doppler evaluation between the preoperative and postoperative periods (all p values ≥ 0.3). We found no differences in penile length and circumference between the preoperative and postoperative evaluation either in the flaccid or in the erect state. Mean flaccid penile length (cm; preop vs. postop): 13.2 vs. 13 ($p = 0.6$). Mean flaccid penile circumference (cm; preop vs. postop): 11.1 vs. 11 ($p = 0.7$). Mean erect penile length (cm; preop vs. postop): 16.8 vs. 16.5 ($p = 0.08$). Mean erect penile circumference (cm; preop vs. postop): 15.6 vs. 15.3 ($p = 0.2$). This is a small study including highly selected patients treated by a single high volume surgeon. Therefore, these results might not be the same as those seen in the everyday clinical practice.

Conclusions: This is the first report on penile changes in flaccidity and at maximum erection after BNSRRP in patients treated by one high-volume surgeon. The postoperative preservation of erectile function positively correlated with the maintenance of penile length following surgery. We found no change in penile size after surgery.

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