Penile rehabilitation following radical prostatectomy: predicting success.
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Abstract
INTRODUCTION: It has been suggested that the institution of a pharmacologically based penile rehabilitation program in the early stages after radical prostatectomy (RP) may benefit some patients.

AIM: This analysis was conducted to define if predictors of successful outcome with pharmacological penile rehabilitation following RP could be identified.

METHODS: Retrospective statistical analysis was performed on a large database of patients who had participated in a post-RP rehabilitation program. Inclusion criteria included: presence of functional erections permitting sexual intercourse pre-RP and commencement of rehabilitation within 12 months of RP. Patients were instructed to obtain a penetration-rigidity erection on at least three occasions per week and to continue this regimen until at least 18 months after RP using either sildenafil or intracavernosal injection therapy (if oral therapy failed).

MAIN OUTCOME MEASURE: International Index of Erectile Function (IIEF) and visual analog scale erectile rigidity assessment. Stepwise logistic regression analysis was used to generate predictors of erectile function (EF) outcomes with penile rehabilitation.

RESULTS: Ninety-two patients constituted the study population. Mean patient age and duration post-RP at commencement of the rehabilitation program were 59 +/- 10 years and 7 +/- 3 months, respectively. Sixty-seven percent of operations were bilateral nerve sparing (BNS), 11% unilateral nerve sparing (NS), and 22% non-NS. Comorbidities included hypertension 22%, dyslipidemia 30%, coronary artery disease 7%, and diabetes 2%. Preoperative mean self-reported, partner-corroborated erectile rigidity during relations was 90 +/- 20%. At 18 months post-RP, 57% patients had partner-corroborated functional erections without phosphodiesterase type 5 inhibitors with a mean erectile rigidity during relations of 72 +/- 16% compared with 45 +/- 22% for those who denied functional erections postoperatively (P > 0.01). The IIEF-EF domain scores in these two cohorts were 21 +/- 7.5 and 13 +/- 9, respectively (P > 0.01). On multivariate analysis, factors that predicted failure of return of natural erections after RP having followed a rehabilitation program were age >60 years (relative risk [RR] = 1.3), non-BNS surgery (RR = 1.6), presence of >1 vascular comorbidity (RR = 2.1), commencement of rehabilitation >6 months post-RP (RR = 2.8), unsuccessful response to sildenafil at 12 months post-RP (RR = 4.5), and the use of trimix dose >50 units (RR = 8.1).

CONCLUSIONS: More than half of the patients committing to a pharmacological rehabilitation program had return of functional natural erections. Predictors of successful outcome included NS surgery, early post-RP presentation, young age, and absence of vascular comorbidities.

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