Bilateral nerve sparing robotic-assisted radical prostatectomy is associated with faster continence recovery but not with erectile function recovery compared with retropubic open prostatectomy: the need for accurate selection of patients.


Department of Urology and Robotic Surgery, Miulli Hospital, Acquaviva delle Fonti, Bari, Italy.

Abstract

Robotic-assisted radical prostatectomy (RARP) shows measurable advantages, compared to conventional open surgery, even if some aspects are, still, under debate. The aim of this study was to compare the potency recovery rate of patients with clinically localised prostate cancer treated by bilateral nerve-sparing (BNS) RARP or retropubic radical prostatectomy (RRP), and secondarily, the urinary continence recovery evaluation and the oncological efficacy. All patients treated with BNS-RARP or BNS-RRP for clinically localised prostate cancer, performed by a single dedicated surgeon, between January 2004 and December 2008, were enrolled in this non-randomised prospective comparative study. The International Index of Erectile Function (IIEF) and erection hardness score (EHS), in the form of a questionnaire, were self-administered to each patient pre-operatively and after 12 months. The presence of surgical margins was considered as oncological outcome measure. Eighty-two patients underwent BNS-RARP while 48 underwent BNS-RRP. For BNS-RARP and BNS-RRP the median operative time was 221 and 103 min, respectively (P<0.001; df=128; t=721.43), and intra-operative blood loss was 280 and 565 ml, respectively (P<0.001; df=128; t=1742.44). At a mean follow-up period of 12.4±2.3 months, 12 patients (25%) in the BNS-RRP group and 22 (26.8%) in the BNS-RARP group were considered potent with or without drugs (P=0.81). Moreover, we did not find any statistically significant difference between the 2 groups in terms of IIEF and EHS scores after treatment (17.21 vs. 16.98; P=0.16 and 2.1 vs. 2.0; P=0.54). On the other hand, statistically significant differences between the 2 groups were found in terms of faster urinary continence recovery and the presence of positive surgical margins (P<0.001, P=0.009). Shorter catheterization duration (7 vs. 3 days) and post-operative hospital stays (8 vs. 4 days; P<0.001) were found in the BNS-RARP group compared to the BNS-RRP group. In conclusion, our results demonstrate that BNS-RARP does not improve erectile function recovery compared to open radical prostatectomy; however, it significantly improves urinary continence and decreases the presence of positive surgical margins.

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