

ONE YEAR FOLLOW-UP OF SEXUAL FUNCTION AND PENILE REHABILITATION STRATEGIES IN THE FIRST YEAR AFTER OPEN AND ROBOT RADICAL PROSTATECTOMY.

Hypothesis / aims of study

After radical prostatectomy (RP), erectile dysfunction (ED) remains a significant consequence in 19-74% undergoing a nerve sparing radical prostatectomy (1). Currently phosphodiesterase-5-inhibitors dominate the treatment strategy for ED, though a lack of efficacy, side effects and the financial costs lead to a discontinuation in >50% of the cases (2, 3). However no study monitored the different treatment strategies for ED that patients followed in their first postoperative year. The aim of this study was to map the sexual (dys)function and the undertaken penile rehabilitation strategies in the first year after open and robot radical prostatectomy.

Study design, materials and methods

Patients were followed up after an open (ORP) or robot-assisted (RALP) radical prostatectomy. All patients filled in the International Index of Erectile Function (IIEF) preoperatively, at 1, 3, 6 and 12 months after radical prostatectomy. Furthermore all patients indicated at their postoperative visits with the urologist the effect of the PDE-5-inhibitors/intracavernosal injections on a 5-point Likert scale (no tumescence, little tumescence, erection insufficient for sexual intercourse, erection sufficient for sexual intercourse with or without additional PDE-5-inhibitors). The Mann Whitney U test was used to compare the differences in erectile function (IIEF) between both surgical approaches.

Results

One hundred twenty-four patients were included, 83 patients underwent ORP and 41 patients underwent RALP. The mean age was 62 years (ORP) and 61 years (RALP). Other baseline characteristics, as nerve-sparing status and continence status are summarized in Table 1. Mean erectile function scores of the IIEF preoperatively, at 1, 3, 6 and 12 months after radical prostatectomy are indicated in Table 2. No significant differences between ORP and RALP could be indicated at any of the time points.

Table 1 Descriptive characteristics according to surgical approach (ORP/RALP)

	ORP (N=83)	RALP (N=41)
Age (mean (SD))	62.23 (5.93)	61.17 (6.32)
Nerve sparing status		
Nonnerve sparing	16 (19%)	0 (0%)
Unilateral nerve sparing	29 (35%)	3 (7%)
Bilateral nerve sparing	38 (46%)	38 (93%)
Continence status at		
1 month after RP	38 (46%)	25 (70%)
3 months after RP	65 (78%)	33 (80%)
6 months after RP	76 (92%)	39 (95%)
12 months after RP	79 (95%)	40 (98%)

SD: standard deviation, ORP: open radical prostatectomy, RALP: robot-assisted radical prostatectomy

Table 2 Mean erectile function score at the IIEF (IIEF-EF) at the different time-points.

Mean IIEF-EF score (SD)	ORP	RALP	p-value*
Preoperative	17.97 (10.21)	19.65 (10.77)	0.230
1 month postoperative	3.00 (3.41)	5.95 (7.95)	0.069
3 months postoperative	4.74 (4.75)	8.19 (8.77)	0.189
6 months postoperative	5.87 (6.21)	9.89 (10.71)	0.276
12 months postoperative	8.45 (8.79)	11.45 (11.08)	0.241

IIEF-EF score: Erectile Function score of the International Index of Erectile Function, SD: standard deviation; ORP: open radical prostatectomy, RALP: robot radical prostatectomy, *Mann Whitney U test

At one month after surgery only 1 patient (1%) after ORP and 5 patients (12%) after RALP achieved an erection sufficient for sexual intercourse without additional use of PDE-5-inhibitors/intracavernosal injections. At 3, 6 and 12 months after surgery these numbers increased to respectively 3 (4%), 5 (6%) and 7 (9%) after ORP and 7 (19%), 9 (23%) and 9 (23%) after RALP.

Consequently at 1 month after RP only two patients had taken PDE-5-inhibitors in the first postoperative period, but did not have any tumescence. At 3 months after surgery this number was increased to 18 patients (16%). The effect of the medication was however rather small as 8 patients had no tumescence at all, 2 had little tumescence, 4 had an erection insufficient for sexual intercourse and 4 an erection sufficient for sexual intercourse. At 6 months after surgery 35 (29%) of patients had taken PDE-5-inhibitors in the previous period. Of these patients, 15 achieved no tumescence afterwards, 2 little tumescence, 10 an erection insufficient for sexual intercourse and only 8 an erection sufficient for sexual intercourse. Finally at 12 months 61 (52%) patients had taken PDE-5-inhibitors/intracavernosal injections. Of these patients, 13 patients had no tumescence at all, 3 had little tumescence, 8 had an erection insufficient for sexual intercourse, 21 patients had an erection sufficient for sexual intercourse. Of

these 21 patients 3 underwent a nonnerve-sparing procedure and used ICI and respectively 6 and 11 patients underwent a unilateral and bilateral nerve-sparing RP.

Interpretation of results

Only 37 patients of the whole group (N=124) were able to have an erection sufficient for sexual intercourse with or without PDE-5-inhibitors or intracavernosal injections at 12 months after open or robot radical prostatectomy. PDE-5-inhibitors were used by only 52% of the patients in the first postoperative year. Reasons for this are that they want to wait for spontaneous recovery, lost their sexual interest/partner, have problems with the financial cost of the medication or don't like the idea of planned sexual activity.

Concluding message

Only 1 in 3 patients has an erection sufficient for sexual intercourse with or without PDE-5-inhibitors or intracavernosal injections at 12 months after RP. Furthermore approximately half of the patients was not interested in the use of any penile rehabilitation strategy in the first postoperative year.

References

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Disclosures

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