

# A PROSPECTIVE CONCURRENT LONGITUDINAL STUDY OF THE RETURN OF ERECTILE FUNCTION AFTER ROBOTIC AND OPEN PROSTATECTOMY FROM A PENILE REHABILITATION STUDY OF NIGHTLY INTRAURETHRAL ALPROSTADIL VS. SILDENAFIL

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**Introduction:** Erectile dysfunction (ED) is the most common long term consequence after radical prostatectomy. There are no existing concurrent prospective studies comparing erectile function outcomes between the techniques. Comparison between institutions and techniques are difficult because of lack of standardization of patient demographics, inclusion criteria, observation intervals, penile rehabilitation regimen, and outcome measures. We present the preliminary results of the first prospective, bi-institutional, concurrent, comparative study of erectile function outcomes after RAP vs. RP as part of a penile rehabilitation protocol.

## Methods:

A prospective comparative study of the return of erectile function in patients having robotically assisted laparoscopic prostatectomy (RAP) and radical retropubic prostatectomy (RP) was performed at two centers (GWU and NYU) as part of a penile rehabilitative study comparing nightly intraurethral alprostadil (IUA) to nightly sildenafil (SC). 100% of GWU vs. 90% of NYU surgeries were bilateral nerve sparing. Patients began daily medication within two weeks catheter removal and continued for 9 months. IIEF-30 scores were assessed preoperatively as well as postoperatively at 1, 3, 6, 9 and 11 months. The study is ongoing.

## Results:

207 patients were enrolled at both centers. 51 pts withdrew from the study (25%). 104 patients are available through month 9. Patients were randomized 2/1 IUA vs. SC (131/67). Mean age and baseline IIEF (29) did not differ significantly between sites. There were no significant differences between RAP and RP in IIEF scores at each postoperative visit, the percentage of patients returning to baseline IIEF (>25) at 9 months follow up for RAP vs. RP (11 vs. 17%), or the IIEF scores for unilateral and bilateral nerve sparing surgeries.

## Conclusion:

Nightly IUA and SC are well tolerated with similar compliance rates. There are comparable acute declines in erectile function post-operatively between RAP and RP patients, and no significant differences in the normalization of function between either RAP or RP through nine month follow-up.

Procedure	IIEF Preop	IIEF 1 wk	IIEF 3mo	IIEF 6mo	IIEF 9mo
RRP	29.0	1.87 <sup>+</sup>	10.6	11.2	13.4
RAP	29.1	3.42 <sup>+</sup>	9.2	11.1	13.6

RRP = radical retropubic prostatectomy; RAP = robotic-assisted prostatectomy  
\* = p<0.0001

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