

Impact of Low-Dose Oral Sildenafil on Erectile Function As Penile Rehabilitation Protocol After Nerve Sparing Radical Cystectomy in Zagazig University Hospitals

(Original Research Article)

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Abstract

Bladder cancer is very common cancer and Radical cystoprostatectomy is the treatment of choice for muscle invasive bladder cancer and in non-muscle invasive, About 90% of the males complain if ED post nerve sparing radical cystectomy The study included 25 potent and sexually active males with organ confined bladder cancer who were treated with radical cystectomy and urinary diversion. and we follow the patients with Doppler penile us and international index of erectile function and our results shows that no significant deterioration of arterial mechanism postoperatively over preoperative evaluation in both surgical groups $p =$ or more than 0.05. In our study spontaneous progressive return of erectile function over the following months among patients receive sildenafil occurred better than the control group. We find that The recoverability of erectile capacity in post- radical cystoprostatectomy patients is the most part identified with change in veno-occlusive mechanism and the use of low dose oral sildenafil is very beneficial in restoration of erectile function after major nerve sprain pelvic surgery.

Keywords: Urinary Bladder Cancer, Nerve Sparing Surgery, Erectile Dysfunction, Penile Rehabilitation, Oral Sildenafil.

Introduction

Bladder cancer is 9th cancer worldwide and 4th cancer in males of America (ferlay et al., 2014). Bladder cancer is very common in Egypt with incidence rate 4.87 (Stacey et al. 2009).

Radical cystoprostatectomy is the treatment of choice for muscle invasive bladder cancer and in non-muscle invasive (stenzl, et al. 2012).

About 90% of the males complain of ED post nerve sparing radical cystectomy. *Matsuda et al., 2003* Recovery of erectile function post nerve sparing radical cystectomy between 14-18% Walsh P.C. Donker P.J. 1982. The study included 25 potent and sexually active males with organ confined bladder cancer who were treated with radical cystectomy and urinary diversion.

In reconstructive surgery nerve recovery happens at rate of 1-3 mm/d, contingent upon the patient age and other fundamentally local factors (nikovic et al. 2003). In spite of fastidious safeguarding amid radical cystectomy and prostatectomy, with cautious intraoperative mapping of enormous nerves within the pelvis, recuperation of strength if adequate by any means may take as long as 24 months (klotz L et al. 2004).

Materials and Methods

This single blind prospective study was performed between May 2016 and March 2017 in Zagazig University hospitals. The study included 25 potent and sexually active males with organ confined bladder cancer that was treated with radical cystectomy and urinary diversion.

All patients included in the study fulfilled the following criteria:

- *Patients were married*
- *Tumor were confined to bladder and away from bladder neck urethra and prostate were free from carcinoma*
- *Urethra and prostate were free of neurological and penile disease*
- *Patients were fit for anesthesia.*
- *Basal preoperative erectile function was assessed by international index of erectile function and penile Doppler us*
- *After two months of surgery, 25 patients divided into two groups*

- *Group A 12 patients which receive low dose oral sildenafil regularly for 6months*

Group B control group given placebo once daily for 6months and we follow up our patients regularly at 5th and 8th months regarding: IIEF (INTERNATIONAL INDEX OF ERECTILE FUNCTION) SCOR AND PENILE Doppler us (PDU).

Results and Discussion

EF over the following months among group B patient happened .This may have been due to the "neuropria" wonder a brief shortfall of the cavernosal nerves but these unconstrained changes was not as much as low dosage sildenafil heled change and this clarification runs parallel with consequences of trial study done by moreover, low oxygen strain in cavernosal tissue because of hypoxia following surgery prompts vasoconstriction, lead to fibrosis and subsequent ED.

Table (1). The Comparison between Group A and B as Regard erectile Function y LIFE.

Erectile function evaluation	Group A (N=12)	Group B (N=13)	Test	p-value (sig)
IIEF Baseline	19.75 ± 2.45	20.15 ± 1.95	-0.457	0.652(NS)
2 months	7.42 ± 0.99	5.92 ± 1.03	-2.970	0.003 (S)
5 months	10.92 ± 1.37	8.15 ± 1.14	-3.750	<0.001(HS)
8 months	15.58 ± 1.44	11.46 ± 1.26	7.606	<0.001 (HS)
Test p-value (sig)	328.162 ^{ff} <0.001 (HS)	39.000 [‡] <0.001 (HS)		

Table (2). The Comparison between Group A and Group B as Regard Penile Doppler Ultrasound (PDU).

(PDU)	Group A (N=12)	Group B (N=13)	Test	p-value (sig)
PSV (cm/sec) Baseline	48.66 ± 6.15	49.76 ± 4.98	-0.494	0.626(NS)
2 months	45 ± 8.67	45.15 ± 7.70	-0.047	0.963 (NS)
5 months	47.08 ± 8.30	44.85 ± 7.52	0.707	0.487(NS)
8 months	49.17 ± 8.60	46.69 ± 6.89	0.797	0.434(NS)
Test p-value (sig)	7.659 ^{ff} 0.001 (S)	7.202 [‡] 0.007 (S)		

In the present study the penile Doppler did not show significant deterioration of arterial mechanism postoperatively over preoperative evaluation in both surgical groups p = or more than 0.05. In our study spontaneous progressive return of erectile function over

the following months among patients receives sildenafil occurred better than the control group. Additionally, the recoverability of erectile capacity in post- radical cystoprostatectomy patients is the most part identified with change in veno-occlusive mechanism.

This implied that veno-occlusive instrument was better and dynamically returned close to ordinary in the gathering on subjective and target bases within 8 mo of take after up. Moreover, the NS radical cystectomy strategy taken after by low measurements oral sildenafil can guarantee great sexual result "in light of the short follow-up period), in this way, every endeavor ought to be made to safeguard the neurovascular package amid Cystoprostatectomy ". The present study found that utilization of subjective and objective devices in evaluation of the patient is advised and indisputable.

Conclusion

The recoverability of erectile capacity in post- radical cystoprostatectomy patients represents the majority part identified with modify in veno-occlusive mechanism. Also, the veno-occlusive instrument was superior and dynamically returned close to ordinary in the gathering an on subjective and target bases within 8 mo of take after up. This study concludes that use of subjective and objective devices in assessment of the patient is recommended and indisputable. A randomized clinical review utilizing solitary kind of preoccupation over a substantial group of patients for long haul follow-up ought to be done to affirm our conclusion.

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Conflict of interest:

Authors declare no conflict of interest in the present research study

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