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# SAFETY AND FEASIBILITY OF PRE-OPERATIVE ADMINISTRATION OF SILDENAFIL FOR ERECTILE DYSFUNCTION IN RECTAL CARCINOMA PATIENTS: A PILOT STUDY

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## INTRODUCTION

This study explores the safety and feasibility of administering sildenafil as a preventive measure for post-operative erectile dysfunction (ED) in male patients undergoing rectal surgery for rectal carcinoma. By addressing ED proactively, the study will enhance the overall quality of life of these patients and potentially improve surgical outcomes.

## MATERIALS & METHOD

A multi-center, non-randomized, single-arm pilot study was conducted at four different medical facilities. A convenient sampling method was employed and a total of 10 patients from four participating centers were recruited. The patients received oral Sildenafil at a dose of 50mg daily for two weeks before surgery and the medication were stopped 24 hours before the surgery. Safety assessment was assessed by monitoring the vital signs, ECGs, renal and liver function tests, and patients’ documented side effects in monitoring diaries. The erectile function of the patients were assessed based on the International Index of Erectile Function (IIEF) score.

## RESULTS

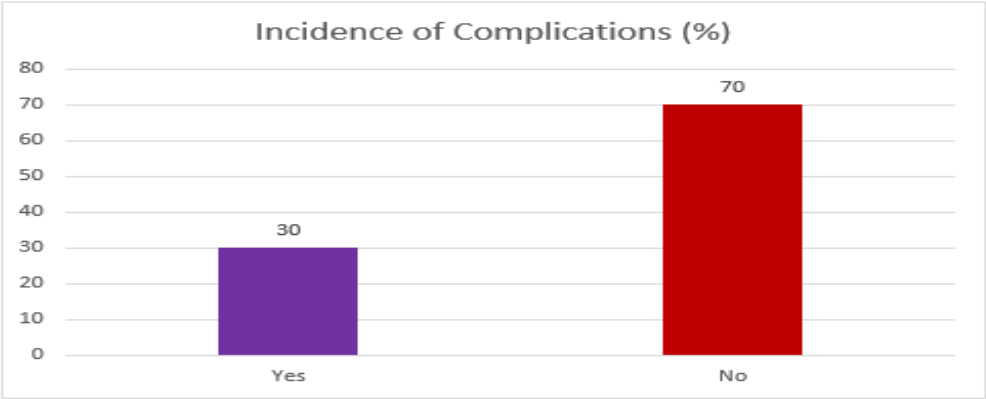
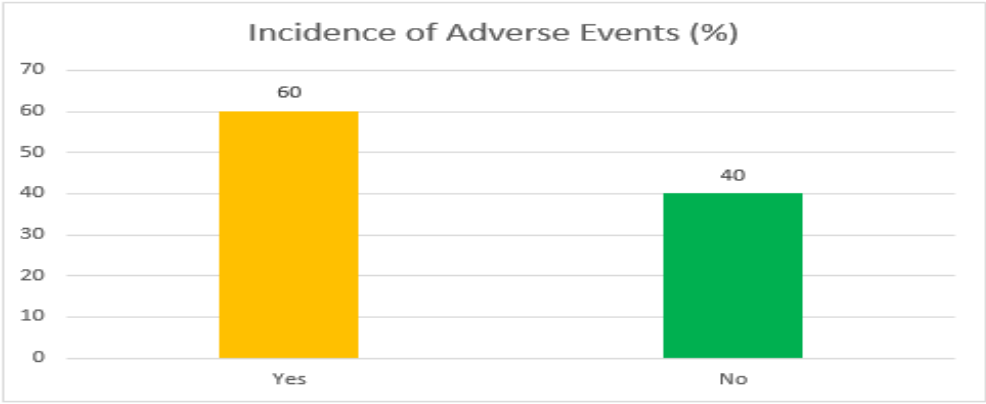
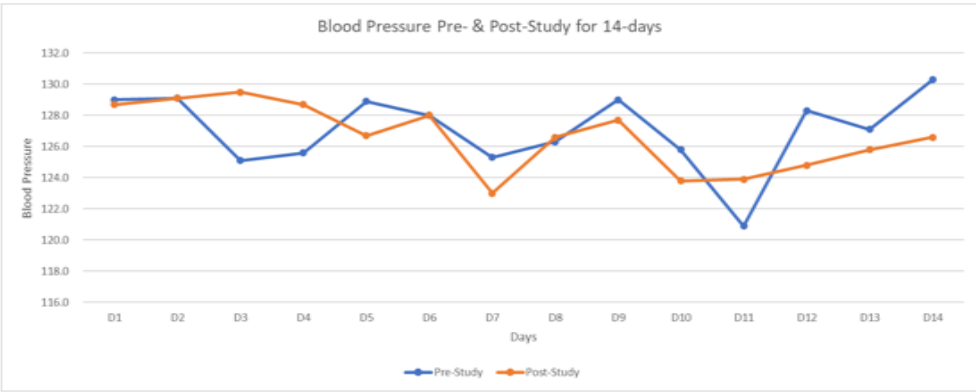
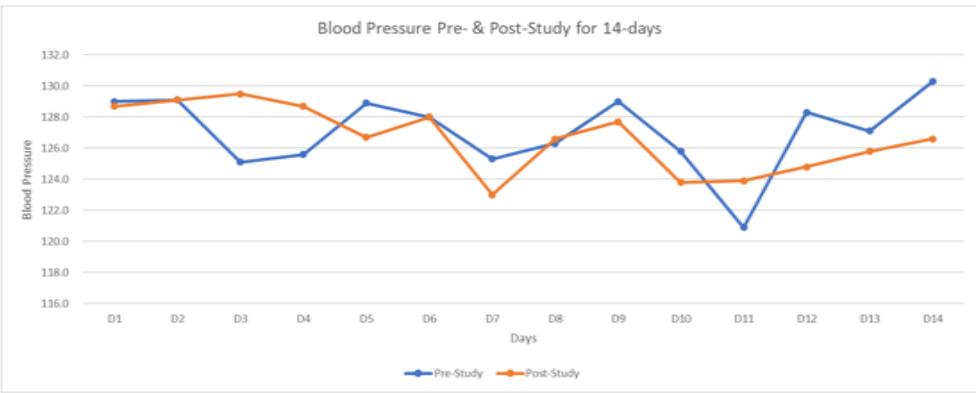
All 10 patients had rectal adenocarcinoma tumors and exhibited 100% compliance. The IIEF scores showed a significant decrease post-treatment (p=0.005) compared to baseline (24.800 ± 2.251 before and, 18.900 ± 6.939 after). There were no significant association found between blood pressure, pulse rate, ethnicity, age, height, weight, BMI, complications and post-treatment IIEF scores. Furthermore clinical characteristics did not significantly impact post-treatment IIEF scores.

Table 1: Association between patients’ sociodemographic with post-treatment IIEF scores and complications and between complications and post-treatment IIEF scores

Socio demographic	N (%) / Mean ± SD	IIEF Score Post-Treatment	Complications (linear)	Complications (logistics)
		p-value	p-value	p-value
Ethnicity	5 (50)	0.108	-	0.574
Malay	3 (30)	0.890	-	-
Chinese	2 (20)	0.058	-	-
Indian	54.700 ±14.705	0.273	-	-
Age	1.713 ± 0.083	0.070	0.352	0.316
Height	25.357 ± 4.722	0.205	0.432	0.389
Weight	25.357 ± 4.722	0.475	0.180	0.252
Complications		0.724	0.253	0.251

Table 2: Differences in blood pressure and pulse rate between pre- and post-treatment

Variables	Mean ± SD	P-value
<b>Blood Pressure</b>		0.866
Blood Pressure Pre-Study	126.70/71.50 ± 12.306/9.372	
Blood Pressure Post-Study	125.60/73.90 ± 10.013/9.758	
<b>Pulse Rate</b>		0.667
Pulse Rate Pre-Study	73.30 ± 12.311	
Pulse Rate Post Study	72.30 ± 8.447	



## DISCUSSION / CONCLUSIONS

Pre-operative sildenafil administration before rectal carcinoma surgery is safe and feasible, with no significant fluctuations in blood pressure, heart rate, or serious side effects. However, it did not result in a significant improvement in rectal function within the short follow-up period. It is recommended to conduct further research with a longer follow-up period to evaluate the effectiveness of this approach in enhancing erectile function in patients with Erectile Dysfunction.