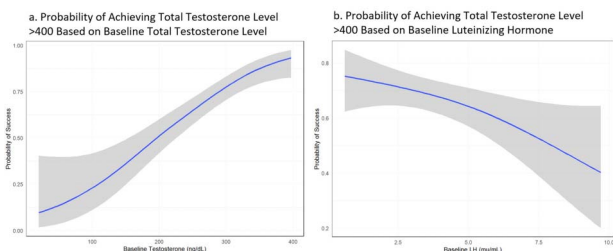


multivariate models for the probability of success based on baseline TT and LH.

CONCLUSIONS: In men with TD, lower LH levels and higher TT levels were a predictors of CC response. Clinicians can incorporate this into their treatment discussions with patients with TD.

Figure. Probability of Response Based on Baseline Total Testosterone and Luteinizing Hormone Using Generalized Additive Logistic Models



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IP10-10

THE IMPACT OF PENILE REHABILITATION (PR) TIMING ON ERECTILE FUNCTION RECOVERY (EFR) OUTCOMES 2 YEARS AFTER RADICAL PROSTATECTOMY (RP)

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INTRODUCTION AND OBJECTIVE: While controversial, PR is purported to optimize EFR after RP. We aim to define the impact of early versus delayed PR on EFR at 2 years after RP.

METHODS: This study includes men with normal baseline erectile function (EF), who underwent bilateral or unilateral nerve-sparing (NS) surgery and completed follow-up for 2 years post-surgery. Those receiving radiotherapy or androgen deprivation were excluded. International Index of Erectile Function – Erectile Function Domain (IIEF-EFD) was used to assess EF; normal baseline EF and EFR both defined as ≥ 24 ; severe erectile dysfunction (ED) ≤ 10 . Nerve Sparing Score (NSS) graded NS 1-4 (1=complete NS; 4=full resection); NS surgery defined as NSS ≤ 2 on one or both sides. For PR, men initiated daily low-dose PDE5 inhibitor supplemented with a full dose of PDE5i at least once a week; goal of ≥ 2 penetration hardness erections a week. Intracavernosal injections were started for PDE5i non-responders. Preoperative PR (PPR) started prior to RP; early PR (EPR) started 0-3 months post-op; delayed PR (DPR) started >3 months after surgery. Demographics, comorbidities, and hormone profiles were assessed. Low testosterone defined as <300 ng/dL. EFR was compared between PPR, EPR and DPR. Multivariable models were used to define predictors of EFR at 24m post-RP. Variables included patient age, comorbidity status, PR timing, Bilateral NS, and PDE5i exposure.

RESULTS: 1042 men were evaluated with a median age of 60 (IQR 55, 65) years. 26% had obstructive sleep apnea, 9% had diabetes, 41% had ≥ 2 vascular comorbidities, 26% had low T, and 35% were former or current smokers. 80% had bilateral, and 20% had unilateral NS surgery. PPR was undertaken by 17%, EPR 36%, and DPR 46%. At 24m post-RP, the median IIEF-EFD score overall was 19 (IQR 8, 27), with those having PPR 23 (14, 29), EPR 20 (7, 28) and DPR 16 (7, 25) ($p < 0.001$). Comparing PPR, EPR, and DPR, the earlier intervention was associated with significantly higher EFR rates (PPR 50%, EPR 42%, DPR 28%, $p < 0.001$) and significantly lower severe ED rates (PPR 18%, EPR 32%, DPR 35%, $p < 0.001$). Patient age, PR timing, and bilateral NS surgery were predictors for functional erections. Age and bilateral NS surgery were predictors for severe ED (Table 1).

CONCLUSIONS: The PR Timing on EFR after surgery is critical. PPR and EPR predict better EFR outcomes compared to DPR 2 years post-RP.

Table 1. Predictors of Functional Erections and Severe Erectile Dysfunction

	EFR (IIEF-EFD ≥ 24)			SEVERE ED (IIEF-EFD ≤ 10)		
	OR	CI	p-value	OR	CI	p-value
Age (per decade increase)	0.71	0.58-0.86	<0.001	1.73	1.40-2.13	<0.001
Early RP (PPR/EPR vs DPR)	1.82	1.40-2.37	<0.001	0.78	0.60-1.03	0.079
NS Surgery (Bilateral, yes)	1.94	1.36-2.77	<0.001	0.60	0.43-0.82	0.002

EFR = Erectile function recovery, IIEF-EFD = International Index of Erectile Function Erectile Function Domain, ED = Erectile dysfunction, PPR = Preoperative penile rehabilitation, EPR = Early penile rehabilitation, NS = Nerve-sparing, OR = Odds ratio, CI = Confidence interval

Source of Funding: None

IP10-11

PRELIMINARY ASSESSMENT OF GLP-1 RECEPTOR AGONISTS ON TESTOSTERONE LEVELS, ERECTILE FUNCTION, AND METABOLIC OUTCOMES IN MEN WITH OBESITY OR TYPE 2 DIABETES

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INTRODUCTION AND OBJECTIVE: Glucagon-like peptide-1 receptor agonists (GLP-1 RAs) have benefits in glycemic control and weight reduction. Emerging research also suggests benefits in male reproductive health, including improvements in testosterone (T) levels and erectile function. However, new studies highlight that GLP-1 RAs may induce significant loss of lean body mass, or sarcopenia. Given that T can support muscle maintenance, our study seeks to explore the interplay between GLP-1 therapy and T levels, as well as provide preliminary insights into their impact on sexual function.

METHODS: A retrospective chart review was conducted on 53 male patients prescribed GLP-1 RAs for type 2 diabetes (T2DM) or obesity. Data collected included demographics, smoking status, indications for GLP-1 RA, hypogonadism diagnosis, T replacement therapy usage, erectile dysfunction medication use, weight, BMI, HbA1c, and total and free T (pre- and post-therapy). Analyses were performed with SPSS 29 (IBM Corp., Armonk, NY).

RESULTS: Results are summarized in Table 1. The mean baseline BMI was 35.56, with 64% of patients with obesity. The mean baseline HbA1c was 6.43, with 36% with prediabetes and 40% with T2DM. Patients showed a mean increase of 111 ng/dL in total T. A paired t-test comparing pre- and post-testosterone levels showed a statistically significant improvement ($t = -2.19$, $p = 0.048$). The mean SHIM score increased by 2.4; however, individual patient scores demonstrated variability. The Wilcoxon signed-rank test for SHIM scores yielded no significant difference pre- and post-therapy ($W = 10.5$, $p = 0.42$). Regression analysis revealed no significant relationship between weight change and testosterone levels (R -squared = 0.000, $p = 0.969$), with a regression coefficient of -0.1020.

CONCLUSIONS: GLP-1 RA therapy is associated with significant increases in T among men with obesity or T2DM. The lack of a significant association between weight loss and T change suggests that the underlying mechanisms may be independent of weight loss. While preliminary data showed improvements in erectile function, additional data will be necessary to determine whether these trends will achieve clinical or statistical significance. Given emerging data on sarcopenia and GLP-1 RAs, future studies should investigate the potential role of combined GLP-1 and testosterone therapies to optimize outcomes in body composition, metabolic control, and sexual health.

Table 1. Impact of GLP-1 Receptor Agonist Therapy on Testosterone Levels, Sexual Health, and Metabolic Parameters in Men with Obesity or Type 2 Diabetes: Summary statistics

Parameter	Pre-T Total (ng/dL)	Post-T Total (ng/dL)	Change in T Total (ng/dL)	Pre-SHIM Score	Post-SHIM Score	Change in SHIM Score	Weight Change (%)	HbA1c Change (%)
Patients included	14	14	14	5	5	5	25	25
Mean	247	358	111	12.4	14.8	2.4	-6.3	-0.8
Median	219	348	129	8	16	1	-5.1	-0.3
Range	82-436	757	-83 - +611	5-24	4-23	-4 - +10	-29.2 - +8.1	-2.5 - +0.2

Source of Funding: None