

Sex Life and Vitality During Treatment for Prostate Cancer: It Is Possible! A Case Report

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Abstract: Life expectancy and survival rates for prostate cancer (PCa) are improving but maintaining quality of life (QoL) during and after treatment remains a major clinical challenge. Erectile dysfunction (ED), psychosocial distress, and disturbances in body image and masculinity are highly prevalent in this population. A 66-year-old man with high-risk PCa (PSA 28.8 ng/mL; Gleason 4+5; pT3b pN1) underwent laparoscopic radical prostatectomy, adjuvant radiotherapy, and intermittent hormone therapy, presenting with ED unresponsive to oral phosphodiesterase-5 inhibitors. Health-related QoL (HRQoL) and erectile function were prospectively assessed using FACT-P (version 4) and IIEF-5. The patient attended weekly group psychotherapy from June 2022 and progressed to intracavernous injection therapy (alprostadil + papaverine + phentolamine). IIEF-5 scores improved from 5 (severe ED) to 25 (normal erectile function). FACT-P demonstrated sustained gains in emotional well-being and global QoL. A coordinated multidisciplinary pathway combining intracavernous injection therapy and continuous group psychotherapy enabled recovery of normal erectile function, sexual satisfaction, and overall well-being despite multimodal oncologic treatment.

Keywords: Prostatic neoplasms; Erectile dysfunction; Quality of life; Psychotherapy, group; Penile Erection.

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1. Introduction

Prostate cancer (PCa) is one of the most common malignancies worldwide. In 2022, GLOBOCAN estimated approximately 1.47 million new cases globally [1]. Although life expectancy and survival rates are improving, the management of treatment-related side effects remains a central challenge in urologic-oncology practice. Health-related quality of life (HRQoL), defined across physical, psychological, and social domains, is profoundly affected by the lasting consequences of PCa treatment [2,3].

The biopsychosocial model integrates biological, cognitive, emotional, social, and cultural factors that predispose to, precipitate, and maintain sexual disorders, as well as those influencing their management [4]. Erectile dysfunction (ED) occurs in approximately 50% of patients across age groups, treatment types, and time elapsed since treatment [5,6]. Among men undergoing radical prostatectomy (RP), the estimated prevalence of ED varies between 50% and 80% depending on how ED is defined, when it is measured, and how successfully it is treated [7].

Approximately 17% of patients experience clinically significant depressive or anxiety symptoms after diagnosis, including fear of recurrence, body-image concerns, and masculinity disturbance [2]. Untreated clinical anxiety and depression are associated with a

two-fold higher mortality risk compared with other PCa patients. Structured group psychotherapy has been suggested as a low-cost, scalable resource, but prospective data on long-term outcomes remain scarce [8].

The aim of this case report is to describe the long-term sexual and psychosocial trajectory of a high-risk PCa patient managed with a structured biopsychosocial pathway integrating urologic management, sexual-medicine therapies, and continuous group psychotherapy. A review of the relevant literature accompanies the case description.

2. Case Report

A 66-year-old man was referred to a tertiary urologic oncology centre in 2018 due to elevated PSA (28.8 ng/mL) and prostate biopsy showing adenocarcinoma Gleason 4+5, classified as high-risk according to D'Amico criteria [9]. The patient was a former smoker and former alcohol user without other comorbidities. Written informed consent was obtained from the patient for publication of this case report. Ethics committee approval was not required for a de-identified single case report under institutional policy.

He underwent laparoscopic RP in November 2018 with bilateral ilio-obturator lymphadenectomy, without intraoperative complications. Pathological examination demonstrated Gleason 4+5 adenocarcinoma in 12/14 cores, predominantly on the left, with apical and circumferential margin involvement, extraprostatic extension to the left seminal vesicle (pT3b), and metastatic involvement of all dissected lymph nodes without extranodal extension (pN1). Conventional staging showed no distant metastases (M0).

The patient was referred for adjuvant radiotherapy (44 Gy to the pelvis; 66 Gy to the prostate bed; 45 sessions, completed August 2019) with concurrent androgen-deprivation therapy (ADT) using leuporelin 45mg every 6 months, initiated in February 2019. PSA kinetics demonstrated satisfactory response to undetectable levels, with total testosterone below 20 ng/dL, consistent with castration-sensitive prostate cancer. Postoperatively, the patient remained continent but presented with ED. Initially, it was prescribed tadalafil 5mg daily, then added sildenafil 50mg on demand, but the disease was unresponsive to oral phosphodiesterase-5 inhibitors (PDE5Is). Despite ongoing ADT, he reported preserved libido and a clear wish to remain sexually active. In November 2022, after 3 years of hormonal blockage, ADT was suspended with maintained PSA stability.

In February 2023, intracavernous injection therapy was initiated using a tri-mix formulation of prostagladine E1 10mcg/mL, papaverine 30mg/mL, and phentolamine 1mg/mL. The response was reasonable with 0.4 mL during patient training, and this dosage was recommended to be used no more than 3 times per week, with at least 24 hours between uses, before sexual relations. The daily dosage of tadalafil 5mg was maintained. Approximately one year after suspending ADT (November 2023), the patient reported improved libido and better response to ED treatment, reflecting hypothalamus-pituitary-gonadal axis recovery, demonstrated by testosterone levels above 300 ng/dL. The intracavernous injection dosage was reduced to 0.2 mL of tri-mix, and the patient was overall satisfied with the treatment.

In September 2024, PSA levels raised to 0.86 ng/mL and leuporelin was reintroduced. PET-CT PSMA showed common and internal iliac, as well as para-aortic lymph nodes metastasis. Abiraterone was associated with ADT, and the patient is being treated alongside the clinical oncology department, considering metastatic castration-sensitive prostate cancer. At 71 years old, patient refers reduced libido but maintains sexual activity with the same treatment prescribed the year before. Testosterone levels once again are below <20 ng/dL. During a great part of this patient's treatment, since June 2022, he attended a weekly group psychotherapy programme dedicated to PCa survivors, conducted by the same psychotherapist throughout the follow-up period. This multidisciplinary approach was very important in dealing with the side effects of surgery and medication, as well as the different stages of disease and the sexual wellbeing.

3. Materials and Methods

This is a prospective single-case study evaluating HRQoL and sexual function in a patient who underwent RP, adjuvant radiotherapy, and ADT for PCa. Following the institutional biopsychosocial protocol [10], the steps described in Table 1 were applied. While our established protocol consists of 12 sessions, we extended the follow-up period until May 2025 to address the patient's ongoing dysfunction.

The group psychoeducational intervention integrated Cognitive Behavioral Therapy (CBT) and somatic awareness to enhance overall quality of life following radical prostatectomy. The protocol targeted cognitive restructuring regarding masculinity, debunked misconceptions about prostate cancer, and facilitated behavioral adaptation to non-spontaneous erections. Beyond cognitive interventions, the sessions fostered body awareness and emotional expression, providing a space for patients to process underlying fears, resentment, and disillusionment. By shifting from intellectual insight to somatic experiencing, participants explored new avenues of physical pleasure and adaptation within their current limitations. Additionally, the program emphasized self-management, empowerment, and training patients to become health information advocates within their social networks.

HRQoL and erectile function were assessed at five timepoints (June 2022, March 2023, August 2023, May 2024, and May 2025) using the Brazilian validated versions of the Functional Assessment of Cancer Therapy–Prostate (FACT-P, version 4) [11] and the International Index of Erectile Function short form (IIEF-5) [12]. FACT-P combines the FACT-General (FACT-G) score with the prostate-specific subscale (PCS). The IIEF-5 classifies ED severity as: no ED (22–25), mild (17–21), mild-to-moderate (12–16), moderate (8–11), or severe (5–7).

Table 1. Study design and intervention schedule.

Phase	Description	Instruments / Activities	Frequency
Initial	Individual sessions after diagnosis with guided interviews.	Initial anamnesis; FACT-P (v.4); IIEF-5 (Short Form).	2 individual sessions
Intervention	Group-based psychoeducational and emotional support.	Brief 5-question feedback questionnaire.	12 weekly sessions
Evaluation	Post-intervention assessment.	Reapplication of all initial questionnaires.	13th session
Follow-up	Long-term outcome monitoring.	Individual follow-up interviews.	6, 12, 24 months

FACT-P: Functional Assessment of Cancer Therapy–Prostate; IIEF-5: International Index of Erectile Function short form.

The patient is a widowed, low-socioeconomic-status Evangelical Christian. He had initially lost interest in maintaining sexual relations until engaging with the support group and learning about rehabilitation possibilities. During the therapeutic process, he became romantically involved and remarried. His new partner supported his decisions regarding the use of medications and intracavernous injections. Ultimately, the patient reported a positive sexual experience.

FACT-P assessment demonstrated a clinically meaningful improvement in emotional well-being (EWB), which increased from 20 to 24 between the first and second assessment and remained stable thereafter. The FACT-G total score increased from 101 to 107 and was maintained at 106–107 across follow-up. Physical, social, functional, and prostate-specific subscales remained stable throughout the observation period (Table 2). The patient reported reduced generalised pain and adopted regular daily walking, reflecting broader

functional recovery. IIEF-5 scores improved progressively from 5 (severe ED) at baseline to 8, 20, and finally 25 (no ED) across consecutive assessments, with parallel improvements in confidence, ability to achieve and maintain an erection, intercourse satisfaction, and overall sexual satisfaction (Table 3). The patient resumed sexual activity with reported satisfaction.

Table 2. FACT-P subscale scores across follow-up timepoints.

FACT-P subscale	Jun/2022	Mar/2023	Aug/2023	May/2024	May/2025
Physical Well-Being (PWB)	25	27	27	27	26
Social/Family Well-Being (SWB)	28	28	28	28	24
Emotional Well-Being (EWB)	20	24	24	24	24
Functional Well-Being (FWB)	28	28	27	27	26
Prostate Cancer Subscale (PCS)	40	40	41	40	41
FACT-P Trial Outcome Index (TOI)	93	95	95	94	93
FACT-G Total Score	101	107	106	106	100
FACT-P Total Score	141	147	147	146	141

PWB: Physical Well-Being; SWB: Social/Family Well-Being; EWB: Emotional Well-Being; FWB: Functional Well-Being; PCS: Prostate Cancer Subscale; TOI: Trial Outcome Index.

Table 3. IIEF-5 total scores and ED classification across follow-up timepoints.

IIEF-5 parameter	Jun/2022	Mar/2023	Aug/2023	May/2024	May/2025
Total score (range 5–25)	5	8	20	25	22
Classification	Severe ED	Severe ED	Mild ED	No ED	No ED

ED: erectile dysfunction. IIEF-5 classification: no ED = 22–25; mild ED = 17–21; mild-to-moderate ED = 12–16; moderate ED = 8–11; severe ED = 5–7.

3. Discussion

This case illustrates that combining second-line pharmacological rehabilitation with continuous group psychotherapy can restore sexual function and HRQoL in a high-risk PCa patient who is unresponsive to oral PDE5Is and undergoing intermittent hormone blockade. The trajectory documented here, progressive recovery from severe ED (IIEF-5 = 5) to normal erectile function (IIEF-5 = 25) with parallel gains in emotional well-being, is clinically significant and supports a biopsychosocial approach to survivorship care.

PDE5Is are recommended as first-line therapy for ED, but only 12–17% of men respond to oral medication in the first six months following RP [13]. Penile injections provide an effective alternative: 52–67% of men who undertake a pharmacological penile-rehabilitation strategy can regain erectile function, compared with only 20% of untreated men [13]. The present case confirms that response may improve over time, particularly following the suspension of ADT. The restoration of testosterone to physiological levels likely contributed to the substantially improved injection response observed approximately one year after ADT discontinuation, consistent with the known effects of testosterone on corporal smooth-muscle function and PDE5 expression.

The psychosocial dimension of PCa survivorship is frequently underaddressed. Partners often experience PCa-related sexual dysfunction as a "couple's disease," and depression rates as high as 56% have been reported among men with ED [8]. Group settings

facilitate peer support, normalisation of experiences, and improved communication — critical elements for psychosocial adaptation and rehabilitation. Qualitative syntheses confirm that men benefit from opportunities to discuss unspeakable concerns, leading to enhanced coping and reduced isolation [14].

A further important contextual factor is the historical neglect of sexuality in PCa survivorship care, wherein management has often been limited to oncologic resolution and ED accepted as an inevitable sequela of ageing. Current evidence supports routine assessment of sexual function before and after treatment, systematic integration of PDE5Is or injection therapy in rehabilitation pathways, and the proactive offer of psychological support, not as a rescue resource but as a standard component of care [4,8].

The educational and informative dimension of group psychotherapy deserves emphasis: clarifying doubts, dismantling myths, and creating a space for effective contact between clinicians and patients transforms each participant into an information conduit within his social network, an effect reinforced at each group session.

Limitations of this report include its single-patient design, the absence of partner-reported outcomes, the lack of a validated control condition, and the inability to isolate the relative contribution of pharmacological versus psychotherapeutic components to the observed recovery.

4. Conclusion

A coordinated multidisciplinary pathway combining intracavernous injection therapy and continuous group psychotherapy enabled a high-risk PCa patient to recover normal erectile function, sexual satisfaction, and overall well-being despite multimodal oncologic treatment. Failure of oral PDE5I therapy should not signal the end of sexual rehabilitation: penile injection therapy remains effective even under hormone blockade, and response may improve after testosterone recovery. Group psychotherapy is a low-cost, scalable resource that addresses masculinity and body-image concerns and reduces isolation. Routine assessment with FACT-P and IIEF-5 enables objective monitoring across the survivorship continuum. This integrated pathway should be routinely offered to men with PCa.

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Conflicts of Interest: All other authors declare no conflicts of interest.

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