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Sexual Rehabilitation After Treatment for Prostate Cancer—Part 1: Recommendations From the Fourth International Consultation for Sexual Medicine (ICSM 2015)

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ABSTRACT

Introduction: Sexual dysfunction is common in patients after radical prostatectomy (RP) for prostate cancer.

Aim: To provide the International Consultation for Sexual Medicine (ICSM) 2015 recommendations concerning prevention and management strategies for post-RP erectile function impairment in terms of preoperative patient characteristics and intraoperative factors that could influence erectile function recovery.

Methods: A literature search was performed using Google and PubMed databases for English-language original and review articles published up to August 2016.

Main Outcome Measures: Levels of evidence (LEs) and grades of recommendations (GRs) based on a thorough analysis of the literature and committee consensus.

Results: Nine recommendations are provided by the ICSM 2015 committee on sexual rehabilitation after RP. Recommendation 1 states that clinicians should discuss the occurrence of postsurgical erectile dysfunction (temporary or permanent) with every candidate for RP (expert opinion, clinical principle). Recommendation 2 states that validated instruments for assessing erectile function recovery such as the International Index of Erectile Function and Expanded Prostate Cancer Index Composite questionnaires are available to monitor EF recovery after RP (LE = 1, GR = A). Recommendation 3 states there is insufficient evidence that a specific surgical technique (open vs laparoscopic vs robot-assisted radical prostatectomy) promotes better results in postoperative EF recovery (LE = 2, GR = C). Recommendation 4 states that recognized predictors of EF recovery include but are not limited to younger age, preoperative EF, and bilateral nerve-sparing surgery (LE = 2, GR = B). Recommendation 5 states that patients should be informed about key elements of the pathophysiology of postoperative erectile dysfunction, such as nerve injury and cavernous venous leak (expert opinion, clinical principle).

Conclusions: This article discusses Recommendations 1 to 5 of the ICSM 2015 committee on sexual rehabilitation after RP. **Salonia A, Adaikan G, Buvat J, et al. Sexual Rehabilitation After Treatment for Prostate Cancer—Part 1: Recommendations From the Fourth International Consultation for Sexual Medicine (ICSM 2015). J Sex Med 2017;14:285–296.**

Key Words: Prostate Cancer; Radical Prostatectomy; Laparoscopic; Robotic; Nerve Sparing; Erectile Function; Rehabilitation

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RECOMMENDATIONS

1. Clinicians should discuss the occurrence of post-surgical erectile dysfunction (ED; temporary or permanent) with every candidate for radical prostatectomy (RP; expert opinion, clinical principle).
2. Validated instruments for assessing erectile function (EF) recovery such as the International Index of Erectile Function (IIEF) and Expanded Prostate Cancer Index Composite (EPIC) questionnaires are available to monitor EF recovery after RP (level of evidence [LE] = 1, grade of recommendation [GR] = A).
3. There is insufficient evidence that a specific surgical technique (open RP [ORP] vs laparoscopic RP vs robot-assisted RP [RARP]) promotes better results for postoperative EF recovery (LE =2, GR = C).
4. Recognized predictors of EF recovery include but are not limited to younger age, preoperative EF, and bilateral nerve-sparing (BNS) surgery (LE = 2, GR = B)
5. Inform patients about key elements of the pathophysiology of postoperative ED, such as nerve injury and cavernous venous leak (expert opinion, clinical principle).
6. The recovery of postoperative EF can take several years (LE = 2, GR = C).
7. There are conflicting data as to whether penile rehabilitation with phosphodiesterase type 5 inhibitors (PDE5Is) improves recovery of spontaneous erections (LE = 1, GR = A).
8. The data are inadequate to support any specific regimen as optimal for penile rehabilitation (LE = 3, GR = C).
9. Men undergoing RP (any technique) are at risk of sexual changes other than ED, including decreased libido, changes in orgasm, anejaculation, Peyronie-like disease, and changes in penile size (LE = 2, GR = B).

INTRODUCTION

Prostate cancer (PCa) represents the first among the three most prevalent malignancies diagnosed in men in many Western societies.[1,2] Current available data suggest that in the face of such a significant prevalence, the rate of deaths is fortunately relatively low, with disparities that reflect regional differences for risk factors and detection practices and/or the availability of treatment.[1–3] Despite advances in diagnosis, early treatment, and advances in any type of treatment including surgical techniques,[4–6] significant morbidity is still reported in most contemporary surgical series.[7–11] Current knowledge of the pathophysiologic basis of ED after RP has significantly improved throughout the decades, mainly because of the recognition of the anatomic location of the cavernous nerves (CNs), their essential role in erection, and the impact nerve injury has on cavernous smooth muscle content and function and potentially the tunica albuginea.[8,12,13] An increasing body of evidence concerning the potential consequences of CN injury from any type of surgical procedure (including pinch, compression, percussion, traction, cautery, and even transection), the importance of the accessory pudendal arteries (APAs),[8,12–18] and the eventual subsequent impact on cavernous smooth muscle have stimulated a large amount of preclinical research and clinical trials aimed at evaluating different strategies to promote the preservation and recovery (early or late) of post-RP EF.[7,8] To improve cancer control and concomitantly to prevent and treat post-RP sexual disorders (in addition to ED),[9,11] having a more precise idea of the anatomy and topography of pelvic organs (ie, prostate and adjacent tissues) and having some familiarity with aspects of the functional anatomy of erection and ejaculation are of major importance.[8,12,13] Likewise, the advent of robotic surgery has significantly changed the "historical" scenario in postoperative sexual health[19–22]; indeed, it is as if robotic surgery had changed the pelvic anatomy and the biological and functional response of the patient.

In this context, the concept of penile rehabilitation and treatment and the use of any intervention or a combination of interventions (including pharmacotherapies, devices, or actions) whose goal is broadly thought of as being aimed at restoring satisfactory EF are based on three inter-related concepts: (i) improving cavernosal oxygenation, (ii) promoting endothelial protection, and (iii) preventing CN injury-induced structural changes of the penis.[7,8,10,23]

This the first of two articles aimed at defining a shareable roadmap for preventing and managing sexual dysfunction in those patients who wish to continue to be sexually active after RP. The members of Committee 12 (pharmacotherapy for erectile dysfunction, testosterone deficiency, and sexual rehabilitation after treatment for prostate cancer) of the Fourth International Consultation for Sexual Medicine (ICSM) have undertaken a comprehensive review of the peer-reviewed scientific literature, with the goal of providing an unbiased integrated analysis of the existing knowledge related to preservation and recovery of EF after RP. In this regard, we believe that well before RP[7] the patient has the inalienable right to be given realistic expectations on his postoperative erectile and sexual function.[8,9,24,25] This will help anyone (ie, physicians and patients) understand how to start with the prevention of damage and with subsequent recovery, thus decreasing potential false expectations and subsequent frustrations.[8,9] A literature search for English-language original and review articles published up to August 2016 was performed using the Google and National library of Medicine's PubMed databases. Keywords included *radical prostatectomy, robotic, laparoscopic, nerve sparing, sexual function, sexual dysfunction, erectile function,* and *erectile dysfunction.* The retrieved articles were gathered and examined. Reference lists of retrieved articles and relevant review articles also were studied. For completion of a clinically useful roadmap provided