Sex & Intimacy After Prostate Cancer

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The Normal Prostate

- Walnut-sized gland
- Located just below the bladder
- Surrounds part of the urethra
- Primary role is to produce fluid for semen, which transports sperm
- Nerves for erections run along the posterior side
Prostate Cancer: Epidemiology

- 241,740 estimated cases in the US in 2012; 1 in 6 lifetime risk
- In U.S.: Highest among African American Men; Lowest among American Indian/Alaska Native
- 28,170 estimated deaths in 2012
Radical Prostatectomy

• Surgical procedure to remove the entire prostate most commonly through an incision from just below the navel to the pubic bone (May be done through incision between scrotum & anus)

• Done under general or regional anesthesia approximately 1 1/2 -4 hours in duration

• Nerve Sparing- preserve the nerves for erectile function. Despite this advancement ED has been reported as high as 88%

Prevalence of Erectile Dysfunction after Prostate Treatment

- Review of the literature reveals that 9-100% of men have erectile dysfunction after prostate cancer treatment.
- AUA Task Force was unable to establish ED prevalence rates after RRP, XRT and brachytherapy from research due to imprecise or absent descriptions of variables.
- Rates are higher in multicenter, multisurgeon series compared to single center surgeon series.
- Erectile dysfunction is common after prostatectomy.
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“I’ve just proved I don’t exist.”
Sexual Function with Prostate Cancer

- 44.1% of men in active surveillance had ED compared to 81.1% of radical prostatectomy patients at a median of 2 years after diagnosis. [Wilt, T. et al. (2012). Radical prostatectomy versus observation for localized prostate cancer. NEJM, 367(3), 203-213]

- Prostate Cancer Outcomes Study (Reports from Survey within Multiple States across the US). n = 1288
  - Erectile dysfunction 78% at 24 months after treatment and 72% 60 months after treatment.
  - Sildenafil most common treatment reported
    - Penson et al. (2008). 5 year urinary and sexual outcomes after radical prostatectomy…The Journal of Urology, 179, S40-44.
Laparoscopic/Robotic Prostatectomy

- Advantages: Decreased length of stay and complications
  - Hospital stay-93% discharged within 24 hours
  - Less blood loss (75% less on average)
  - Incontinence is still an issue
  - ED is still in issue

• Erectile Dysfunction: Still a Problem!
  – ED: Of those with normal erectile function before surgery-27-61% did not return to their baseline SHIM
  – 67.3% of the men had some level of erectile dysfunction after robotic prostatectomy (n = 55 men)
Radiation Therapy: External Beam

- External Beam Radiation: High energy rays utilized to kill prostate cancer given in a short session each day (M-F) for approximately 7-9 weeks.
- Intensity modulated radiotherapy (IMRT)-allows modulation of intensity of each beam for greater control of dose distribution with the target
- 3D conformal radiation therapy (CRT)- computer identifies the prostate and cancer within the prostate. Next generation: four-dimensional (4D) conformal radiotherapy (CRT)
- Image guided radiotherapy (IGRT)-delivering the radiotherapy with accuracy of image guidance to determine appropriate fields and beam weights
• Brachytherapy-radioactive seeds are implanted in the prostate. Utilizes CT scan and imaging to create a template for implants. Seeds are implanted via long hollow needles inserted through the perineum into the prostate tissue. The prostate is anchored with positioning needles guided by ultrasound imaging. Procedure lasts about 1 hour and is mostly done on an outpatient basis under local, general or spinal anesthesia.

• Considerations for contraindication of Brachytherapy: Advanced disease T3-T4, High Gleason score, prostate size, pelvic structure, previous prostate procedures.
Radiation Therapy: Side Effects

- Urinary Frequency/Urgency/Urge Incontinence/Pressure/Pain
- Fecal frequency/urgency/incontinence
- Erectile dysfunction
- Skin irritation
- Nurses can help manage these side effects
Androgen Deprivation Therapy

- Either through castration or pharmacueticals aimed to nullify testosterone
- Side effects may include reduced or absent feelings of sexual desire, erectile dysfunction, weakness, fatigue, loss of muscle mass, growth of breast tissue, hot flashes, anemia and weakening of the bones (osteoporosis).

How does Prostate Cancer Treatment Impact Sexual Function?

- The most common side effect of prostate removal, prostate radiation, or hormone ablation is erectile dysfunction.
- Ejaculation does not typically occur after prostate removal or radiation.
- The penis may seem to have gone up into the body after these procedures.
- These factors can impact how a man feels about himself and his intimate relationship with his partner.
Sexual Intimacy and Communication

• Sexual talk often difficult – so creating warmth and trust very important

• Affection and intimacy are important

• You are both still need each other in many ways
Where and When to Talk to Each Other

• Eliminate pressure to perform – so talk outside the bedroom
• Talk about obstacles to talking
  – i.e. self-consciousness caused by physical changes (i.e. weight gain, scarring, catheters, ostomy appliances)
  – Fear of not being able to perform well
  – Lack of comfort talking about sex historically, making it more difficult to start now
• More you do it, easier it gets
• Professional help available if you get stuck
Male A&P
Penile Rehabilitation after Prostatectomy

- The Goal: Preserve penile function by increasing blood flow to the penis
- Promote smooth muscle relaxation/vasodilatation with increased blood flow & tissue oxygenation
- Any changes in blood flow to the penis may facilitate improved health of the tissue within the penis and therefore prevent further damage to the penis in terms of atrophy and scarring
Penile Shortening


• First occurrence is noted after catheter removal and to some extent up until 1 year after surgery

Therapies

- Psychological Counseling, lifestyle changes
- Vacuum Devices
- Pharmacological Agents- pills, urethral suppositories or injections
- Surgery
Erectile Dysfunction: Vacuum Therapy

INTERVENTION: Vacuum constriction device (VCD)

FDA approved for over the counter distribution - efficacy rates of 85-90% reported

Pros:
- Works!
- Non-invasive

Cons:
- Cumbersome & awkward
- Must wear band during sex
Penile Shortening Treatment

- Vacuum constriction therapy-
  - 28 men randomized to early treatment (1 month after RRP) or none until 6 months; Stretched penile length was preserved, those who did not do treatment loss approximately 2 cm in stretched length \( p=0.013 \) Kohler et al. (2007). A pilot study on the early use of the vacuum erection device after RRP. BJU, 100(4), 858-862.
Treatment of Erectile Dysfunction After Radical Prostatectomy - Albaugh


Oral Agents

INTERVENTION: MEDICAL TREATMENTS - Pills

PDE Type 5 inhibitors primary drug class - oral erectile dysfunction therapy

Sildenafil (Viagra 25-100mg)
Vardenafil (LeVitra 5-20mg); Staxyn 10 mg dissolves on tongue
Tadalafil (Cialis 5-20mg); Daily 2.5-5mg
Avanafil (Stendra 50-200mg)

Drugs are potent, selective inhibitors of type 5 phosphodiesterase - improve erectile function by inhibiting breakdown of cyclic GMP - smooth muscle relaxation enhanced

Contraindicated with Nitrates, Teach Patient about NAION
Precautions with Alpha Blockers
Oral agents for penile rehab used nightly or three times a week; multiple studies with different agents

- 76 men taking nightly Sildenafil 50-100mg: 4% of the placebo group (n=1 of 25) versus 27% (n=14 of 51, P=0.0156) Padma-Nathan, H., et al. (2008). Randomized, double-blind, placebo-controlled study of postoperative nightly sildenafil… Int Jour of Impot Research, 20, 479-486.

- 30 men night time sildenafil: Twenty-three (77%) showed significantly improved nocturnal erectile activity (on rigiscan) with sildenafil (P <0.01), 5 patients (17%) showed comparable nocturnal erections with sildenafil & placebo, 2 patients (6%) showed improved nocturnal erectile activity with placebo (P <0.05) Montorsi, F., Maga, T., Strambi, L. F., Salonia, A., Barbieri, L., Scattoni, V., et al. (2000). Sildenafil taken at bedtime significantly increases nocturnal erections: results of a placebo-controlled study. Urology, 56(6), 906-911.
Erectile Dysfunction
Treatment: MUSE

Urethral suppository
• Dosage: 250 to 1000 mcg
• Onset: 5-10 mins; Duration 30-60 mins

• Pros: Easy!
• Cons: Doesn’t always work; Side effects- pain, dizzy, hypotension, lightheaded
Treatment: MUSE  
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Intraurethral alprostadil for Penile Rehab:  
56 men treated with MUSE 125-250mcg three X per week for 6 months vs. 35 men without treatment. 40% of MUSE rehab men reported spontaneous erections sufficient for sex vs. 11% without penile rehab. (Raina et al. (2007). The early use of transurethral alprostadil...BJU Int., 100, 1317-21)

Nightly Intraurethral alprostadil and Oral agents seem to work equally well for penile rehab  
(McCullough et al., (2010). Recovery of erectile function after nerve sparing radical prostatectomy and penile rehabilitation...J Urol, 183(6),2451-6)
Treatment of ED: Injections

Intracavernosal Injection Therapy (PGE1 & Trimix): alprostadil sterile powder and alprostadil alfadex, both synthetic formulations of prostaglandin E1
Trimix (off-label/non-FDA approved)-PGE1, phentolamine, & papavarine

• Dosage: alprostadil 5-40 mcg w/ PGE; Doses vary w/ trimix

Pros: Works! & No Tension Rings!

Cons: More serious side effects & Must inject each time
Penile Injections
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- 58 men who did penile rehab versus 74 who did not. Used Injection for three erections a week from either sildenafil or penile injections. 59% of those doing penile rehab could have medication unassisted erections versus 19% of men not going through rehab (p < 0.001) Mulhall, J. et al. (2005). The use of an erectogenic pharmacotherapy regimen following radical prostatectomy improves recovery of spontaneous erectile function. Jour of Sex Med, 2, 532-40
Impact of ED on QOL after RRP - Albaugh

- 72% of men (n = 89) felt QOL was moderately to severely affected at a median of 92 (71-130) months after RP (Meyer, Gillatt, Lockyer, & Macdonagh, 2003. The effect of erectile…BJU Int, 92, 929-31)

- Men with ED & PCa (n = 47) report less psychological negative impact of ED on sexual experience (p = 0.05) and emotional life (p = 0.05) when compared to men with ED without prostate cancer (n = 121) [ Penson et al. (2003). Is quality of life different…J Urol, 169(4), 1458-61)

- QOL improves with treatment of ED after RP
  - Improved sexual confidence, sexual self esteem and sexual relationship with penile injections (Albaugh & Ferrans. (2010). Impact of penile…Urol Nurs, 30(1), 64-77)
Side Effects & Barriers to Treatment

- Pain, Priapism, Bruising, Curvature of penis
- Barriers reported by patients included lack of efficacy, pain, fear of priapism and psychological difficulty continuing to give self injections
- 2 men (10%) were not using the injections in the 3rd month
INTERVENTION: Penile prosthesis implantation performed when conservative treatments not effective/desired by patient

Irreversible ED treatment - failure rate approximately 2.5%

Inflatable penile prosthesis provides more aesthetic erection, better concealment than semi-rigid prosthesis

Complications include infection (1-12%), urethral/corporal perforation (6%), prolonged pain, device malfunction, need for further surgery

Antibiotic coated prosthesis to reduce infections
Key Points

• Sexual side effects are common after prostate cancer treatment
• Erectile dysfunction negatively impacts quality of life
• Early treatment of erectile dysfunction may improve return of erectile function in men after radical prostatectomy
• Erectile dysfunction can be treated successfully the majority of the time, but every treatment has good and bad aspects
Ask The Experts
Panel Discussion: Audience Q&A
“Is Active Surveillance Right for Me?”

Moderated by:
Kristen Kingzett, MD, Internal Medicine, Wayne State University School of Medicine

Expert Panel:
Jeffrey Triest, MD, Urology, Karmanos Cancer Institute
Steven Lucas, MD, Urology, Karmanos Cancer Institute
Isaac Powell, MD, Urology, Karmanos Cancer Institute
What about Active Surveillance?

KRISTEN KINGZETT, MD
ASSISTANT PROFESSOR
GENERAL INTERNAL MEDICINE
WAYNE STATE UNIVERSITY
Role of Primary Care (1): “The Prequel”

- Most often, it’s my actions which lead up to the diagnosis.
  - A primary care provider (PCP) may initially raise the suspicion for prostate cancer.
- Helping determine if and/or when you need a biopsy
- Referring you to the appropriate “next step” doctor
Role of Primary Care (2): After diagnosis

- My most important role is acting as an unbiased “sounding board” – someone to help you review the options you’ve been given.

- Your PCP knows your health history very well. This allows me to help bring factors about your other health concerns into your treatment decision making.

- Your baseline function, and other medical problems, can help determine the degree of dysfunction after any treatment you have.

- I may help you decide, as an individual, if treatment is right for you – one of the decision-making “tools” you have available to you.
KEY TERMS: Working Definitions

- ACTIVE SURVEILLANCE
- LOW RISK PROSTATE CANCER
What is Active Surveillance? (1)

“Active surveillance (expectant management) for men with prostate cancer involves the postponement of immediate therapy, with definitive treatment used if there is evidence that the patient is at increased risk for disease progression.”

Why?

- With PSA screening, we are finding more low risk prostate cancers.
- Prostate cancer is often detected when it is not clinically significant; postponing treatment for many of these patients does not lead to any additional harm.
- Active treatment may result in unwanted “side effects” (without clear benefit).
What is Active Surveillance? (2)

- Who is eligible?
  - “Low Risk Prostate Cancer”
    - PSA ≤ 10
    - Gleason score ≤ 6 (Grade)
    - T_{1c} - T_{2a} (Stage)
      - T_{1c}: no nodule
      - T_{2a}: nodule involving less than \( \frac{1}{2} \) of 1 side of the prostate
    - Biopsy Results
      - < 3 cores involved
      - <50% of any one core involved

Active Surveillance: Suggested Algorithm for Eligibility and Follow-Up. From: Active Surveillance for Favorable Risk Prostate Cancer: What Are the Results, and How Safe Is It? Dr. Laurence Klotz; Prostate Cancer Research Institute
What is Active Surveillance? (3)

- **Example: Follow-up schedule**
  - Check PSA, Digital Rectal Exam (DRE) every 3 months for 2 years. Then every 6 months *assuming PSA is stable*.
  - 10-12 core biopsy at one year, and then every 3-5 years until age 80.

- **Example: When to intervene**
  - If PSA doubles in < 3 years time
    - Following this schedule, would be based on ≥ 8 determinations
    - This tends to be about 20% of patients.
  - If Grade (by biopsy) progresses to Gleason 7 (4+3) or higher.
    - This tends to be about 5% of patients.

*Active Surveillance: Suggested Algorithm for Eligibility and Follow-Up. From: Active Surveillance for Favorable Risk Prostate Cancer: What Are the Results, and How Safe Is It? Dr. Laurence Klotz; Prostate Cancer Research Institute*
Questions to Ask Your Doctor

- When is active surveillance right for me?
  - What is the grade of my tumor? What is the stage?

- What are the pros/cons of active surveillance?

- If I wait and the prostate cancer progresses, can I still be cured?

- How will we know if the cancer is getting worse?

- Between appointments, what problems should I tell you about?
“HOT TOPICS”: Active Surveillance

- Who is a candidate for surveillance?
  - Should age influence selection for surveillance in low risk prostate cancer?
  - Should race influence selection for surveillance?
  - What should we use as the definition of low risk prostate cancer?
- Who should do surveillance?
  - Multidisciplinary centers? Private office?
- How should surveillance be done?
  - Are there standard protocols?
  - When do you re-biopsy?
CASE #1

- 55 year-old; Gleason score = 6, PSA (Prostate Specific Antigen) = 4; 2 cores positive, 20% largest core involvement
CASE #2

- 65 year-old African American male, Gleason 6, PSA = 4, 2 cores positive, 20% largest core involvement
CASE #3

- 65 year-old, Gleason 6, PSA = 6, PSA was 3 when checked 1 year earlier, and was 1.5 when checked 2 years earlier; 2 cores positive, 20%, largest core involvement
CASE #4

- 65 year-old, Gleason 6, PSA = 6; 4 cores positive, 20% largest core involvement
CASE #5

- 65 year-old, Gleason 3+4 in core, PSA = 5; 25% core involvement. Wishes to avoid side effects of treatment.
THANK YOU!

REFERENCES:
• NIH/NCI BOOKLET: WHAT YOU NEED TO KNOW ABOUT PROSTATE CANCER
• NIH/NCI BOOKLET: TREATMENT CHOICES FOR MEN WITH EARLY-STAGE PROSTATE CANCER
• UPTODATE.COM
• CHEN RC, CLARK JA, TALCOTT JA: INDIVIDUALIZING QUALITY-OF-LIFE OUTCOMES REPORTING: HOW LOCALIZED PROSTATE CANCER TREATMENTS AFFECT PATIENTS WITH DIFFERENT LEVELS OF BASELINE URINARY, BOWEL AND SEXUAL FUNCTION. JOURNAL OF CLINICAL ONCOLOGY. 27, 2009
• IREMASHVILI V, SOLOWAY MS, ROSENBERG DL, MANOHARAN A: CLINICAL AND DEMOGRAPHIC CHARACTERISTICS ASSOCIATED WITH PROSTATE CANCER PROGRESSION IN PATIENTS ON ACTIVE SURVEILLANCE. THE JOURNAL OF UROLOGY. VOL. 187, 1594-1600, MAY 2012
Thank you for attending!