Erectile Dysfunction and the Prostate Cancer Patient

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Urology
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SEX and RELATIONSHIPS ARE AN IMPORTANT PART OF LIFE FOR MOST OF US
Erections require a functioning intact nervous system, vascular system and corpus cavernosum.
The most important part of the patients treatment is a full and frank discussion (s) of their treatment options.

Including:-

- The best possible treatment options for each man according to grade of cancer, volume of cancer, PSA, patient age and any other medical conditions
- The possible side effects of each treatment type
- The patients erectile function pre – treatment
- The patients expectations of a treatment
- The importance of a sexual relationship to each patient and partner.

GIVE EACH PATIENT THE TIME TO MAKE A DECISION WHICH IS RIGHT FOR THEM
What can go wrong, particularly in prostate cancer sufferers?

* **BODY**
  - Damage to nerve and blood supply due to treatments
  - Drugs affecting libido
  - Drugs affecting testosterone levels.
  - Changes in body shape

* **RELATIONSHIPS**
  - Worry over diagnosis
  - Changes in relationship
  - Worry re starting new relationship
  - Can I pass on cancer through sex?

* **MIND**
  - Living with the diagnosis
  - Anxiety and Stress
  - Will having sex make the cancer worse?
<table>
<thead>
<tr>
<th>Treatments</th>
<th>What it affects</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTIVE SURVEILLANCE</td>
<td>Mind and relationships</td>
</tr>
<tr>
<td>LAPAROSCOPIC RADICAL PROSTATECTOMY (ROBOT)</td>
<td>Body, mind and relationships</td>
</tr>
<tr>
<td>OPEN RADICAL PROSTATECTOMY (done rarely)</td>
<td>Body, mind and relationships</td>
</tr>
<tr>
<td>RADICAL RADIOTHERAPY</td>
<td>Body, mind and relationships</td>
</tr>
<tr>
<td>BRACHYTHERAPY</td>
<td>Body, mind and relationships</td>
</tr>
<tr>
<td>HIGH INTENSITY FOCUSED ULTRASOUND (hifu)</td>
<td>Body, mind and relationships</td>
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<tr>
<td>CRYOTHERAPY</td>
<td>Body, mind and relationships</td>
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<tr>
<td>HORMONE THERAPY/BSO</td>
<td>Body, mind and relationships</td>
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</tbody>
</table>
EFFECTS OF TREATMENTS FOR PROSTATE CANCER

- Erectile Dysfunction
- Thoughts and Feelings
- Tiredness
- Low or No Libido
- Urinary/Bowel Problems
- Body Image
- Weight Gain
- Breast Swelling
- Changes to Ejaculation and Orgasm
- Penile Shortening

PROSTATE CANCER
### NICE guidelines 2.4.1

**Prostate cancer and the effect it may have on a patient's sense of masculinity**

<table>
<thead>
<tr>
<th>2.4.1</th>
<th>Adequately inform men with prostate cancer and their partners or carers about the effects of prostate cancer and the treatment options on their sexual function, physical appearance, continence and other aspects of masculinity</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Support men and their partners or carers in making treatment decisions, taking into account QOL as well as survival</td>
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<tr>
<td></td>
<td>Offer men with prostate cancer and their partners or carers the opportunity to talk to a health care professional experienced in dealing with psychosexual issues at any stage of their illness and its treatment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.5.2</th>
<th>Prior to radical treatment, warn men and if they wish their partner, that radical treatment for prostate cancer will result in an alteration of sexual experience, and may result in a loss of sexual function</th>
</tr>
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<td></td>
<td>Warn men about the potential loss of ejaculation and fertility associated with radical treatments for prostate cancer</td>
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<tr>
<td></td>
<td>Ensure that men have early and ongoing access to specialist erectile dysfunction services</td>
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<tr>
<td></td>
<td>Offer men with prostate cancer who experience loss of erectile function PDE5 inhibitors to improve their chance of spontaneous erections</td>
</tr>
</tbody>
</table>
Proximity of nerves to the prostate
Radical prostatectomy

Radical surgery has the reputation of being the ‘bad boy’ but only because the results are immediate. ED tends to develop ‘over time’ in patients having other treatments.

- If opting for prostatectomy, the best chance of maintaining post operative potency lies with having a good nerve sparing prostatectomy.

- Data comparing open surgery v robotic using da vinci robot compared sexual function at 1 year post op.
  - open surgery 49%
  - robotic surgery 81%

- If a nerve is not transected, regeneration may occur. This type of reversible nerve injury is neuropraxia.

Any erection will never be quite the same as before.
Radiotherapy and Brachytherapy

- Erectile function is initially preserved, but deteriorates over time due to fibrosis in neurovascular bundles
- By 2 years ED rate is 40-50%
- Brachytherapy may have less effect on ED than other treatments for prostate cancer – needs more research
All radical treatments including, HIFU and Cryo can & do cause damage to the nerve and blood supply to the penis.

WE KNOW THAT:-
Regular erections, including nocturnal erections are necessary to prevent fibrosis from occurring in the corpora cavernosa

Injury to the neurovascular bundles prevents penile erections from occurring.

This leads to chronic hypoxia resulting in irreversible changes in the histology of the penis preventing erections and causing penile shortening."
There is evidence from basic science investigations that all the PDE-5Is ie **viagra, cialis** and **levitra**, can improve penile oxygenation and prevent fibrosis and loss of smooth muscle cells from occurring in the Corpora Cavernosa.

Continue treatment for 2-4 years even if no spontaneous erections.

Increasing the chances of post treatment potency – Penile rehabilitation
Penile rehabilitation

SHOULD WE BE USING FOR MEN WHATEVER THEIR TREATMENT CHOICE?

Many different protocols:- variation on a theme!
Poor compliance from health professionals – Why?

PDE5i – either pre treatment if existing problems with ED or post treatment. (Post surgery - when catheter removed)

Drug of choice TADALAFIL preferably daily or at least twice weekly – longer lasting effect. Viagra and Levitra can be used but shorter lasting

Use alongside Vacuum device. Ideally patient to be used to sensation of using ‘pump’ pre- treatment.
The vacuum pump as a penile workout!

Use it or lose it

Use regularly post op alongside PDE5i.

Use with and without tension ring.

Encourages blood flow into the penis

Helps prevent penile shortening

Enables couples to have intercourse at earlier stage
Penile rehabilitation continued
INTRA-CAVERNOSAL ALPROSTADIL
CAVERJECT

A frightening thought for most men

- can be used in early post op period or during none surgical treatments
- Use alongside PDE5i ??
- Best chance of regaining erection if there is nerve damage
Hormonal Manipulation
Injection, tablets or BSO

Zoladex, Prostap, Firmagon, Decapeptyl, Bicalutamide, Casodex

- Blocks or stops testosterone production.
- Reduces libido
- Increasing tiredness
- Changes in body image

- Stopping LHRH agonist or gnrh agonist therapy may not result in a normalisation of testosterone, or initiation of spontaneous erections

- Intermittent hormone therapy

- Bicalutamide monotherapy has less impact on libido and erections and may be an alternative to LHRH agonists in men with locally advanced, but not localized disease

Treatment
- PDE5s, pumps, alprostadil, Counselling
<table>
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<tr>
<th>TREATMENT</th>
<th>RESUMING MASTURBATION OR INTERCOURSE</th>
<th>POSSIBLE PROBLEMS</th>
</tr>
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</table>
| Prostatectomy   | Masturbation and night time erections safe post op Keyhole surgery sex if you feel like it once catheter removed  
Open surgery avoid sex first 6 – 8 weeks | ED  
Penile shortening  
No ejaculation  
Infertility  |
| Radiotherapy   |                                                                                                      | ED gradually develops  
Produce less or no semen  
Painful ejaculation  
Fertility problems |
| Brachytherapy   | Sex as soon as you feel like it  
May be advised to use contraception for a while after treatment  
If anal sex – wait until any bowel problems or sensitivity in this area has gone  
If brachy use a condom for the first 2 months following treatment |                                                                                                    |
| HIFU/CRYO       | Sex after catheter removal when you feel like it                                                  | ED  
Less ejaculation  
Fertility problems |
| Hormone therapy | After orchidectomy avoid strenuous sex for 2 weeks.  
You can have sex or masturbate whilst on hormone therapies | Erection problems  
Reduced desire for sex  
Changes to penis size and shape  
Changes to orgasm  
Other body changes |
**Take this to the pharmacy department**

**NHS**

**PRESCRIPTION FORM**

<table>
<thead>
<tr>
<th>Surname</th>
<th>BLOGGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name</td>
<td>JOE</td>
</tr>
<tr>
<td>Address</td>
<td>666 ANYWHERE TCE GATESHEAD</td>
</tr>
</tbody>
</table>

| Prescriber | Me |
| Clinic     | Prostate |
| Hospital Registration number | 007 1/2 |
| Allergies  | Bossy Nurses or the wife |

<table>
<thead>
<tr>
<th>Treatment prescribed</th>
<th>No of days</th>
<th>Quantity supplied</th>
</tr>
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<tbody>
<tr>
<td>Tadalafil 10mgs PO x 1 tablet daily</td>
<td>At least 4 years</td>
<td></td>
</tr>
<tr>
<td>Sexual intercourse whenever you and your partner desire but aim for at least weekly!</td>
<td>Tell you’re too old to manage</td>
<td></td>
</tr>
<tr>
<td>Masturbation daily when not having intercourse</td>
<td>As above</td>
<td></td>
</tr>
<tr>
<td>Vacuum erection device use whenever not masturbating or having sex .... Up to once per day.</td>
<td>As above</td>
<td></td>
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<table>
<thead>
<tr>
<th>Prescribers signature</th>
<th>L Montgomery</th>
</tr>
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<tr>
<td>Date</td>
<td>13/05/2014</td>
</tr>
<tr>
<td>Prescribers name</td>
<td>L Montgomery</td>
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**COMPLETE PRESCRIPTION IN BLACK BALLPOINT PEN**
‘Dealing with erection problems calls for a willingness to keep an open mind, patience and some resourcefulness. But the positive results make that so very worthwhile’