Guideline for Prescribing for

Erectile Dysfunction following Radical Prostatectomy

Background

Radical prostatectomy is associated with erectile dysfunction and despite nerve-sparing surgery, a significant proportion of patients continue to have erectile dysfunction. This is caused by cavernous nerve injury and corporal smooth muscle structural changes and subsequent venous leak development.

Penile rehabilitation is defined as the use of any drug or device at or after radical prostatectomy to maximize the recovery of erectile function. The purpose of penile rehabilitation is the prevention of corpus cavernosum smooth muscle structural alterations, to limit venous leak development during the period of recovery from neuropraxia, and therefore to maximize the chances of a man returning to his preoperative level of erectile function.

Recent studies[1-4] suggest a benefit from early pharmacological rehabilitation after radical prostatectomy.

Department of Health Guidance

DoH guidance[5] (HSC1999/148) on treatment of erectile dysfunction states:

"The Department advises doctors that one treatment a week will be appropriate for most patients treated for erectile dysfunction. **If the GP in exercising his clinical judgement considers that more than one treatment a week is appropriate he should prescribe that amount on the NHS**".

Prescribing Recommendations

Patients undergoing radical prostatectomy should be prescribed:

- **Tadalafil 20mg TWICE WEEKLY OR Tadalafil 5mg ONCE DAILY, two weeks before the procedure and up to 24 months after. Then re-assess effectiveness** (all prescriptions should be endorsed "SLS"[5]).
- Prescribe Sildenafil 100mg TWICE WEEKLY if there is intolerance to Tadalafil.
- Dose (but NOT frequency) may be reduced, as necessary, if adverse effects are experienced.
- Patients should be advised to take tablets regularly NOT when required.
- Patients demonstrating either poor or no response after 3 months treatment with Tadalafil should be considered for alternative therapies such as MUSE®, Vacuum tumescence devices or Alprostadil injections.

- Patients should be reviewed following initial 24 months treatment, and if on-going treatment for erectile dysfunction is required, dosage frequency should normally be reduced to once weekly.

References

1. Montorsi F, Guazzoni G, Strambi LF *et al.* Recovery of spontaneous erectile function after nerve-sparing radical retropubic prostatectomy with and without early intracavernous injections of alprostadil: results of a prospective, randomized trial. *J Urol* 1997; 158: 1408–10

2. Mulhall J, Land S, Parker M *et al.* The use of an erectogenic pharmacotherapy regimen following radical prostatectomy improves recovery of spontaneous erectile function. *J Sex Med* 2005; 2: 532–40

3. Mulhall J, Parker M, Bedford W et al. The timing of penile rehabilitation after bilateral nerve-sparing radical prostatectomy affects the recovery of erectile function. *BJU Int* 2009; 105: 37-41

4. Padma-Nathan H, McCullough A, Giuliano F *et al.* Nightly post-operative sildenafil dramatically improves the return of spontaneous erections following a bilateral nerve-sparing radical prostatectomy. *Int J Impot Res* 2008; 20: 479–86

5. NHS Executive (1999). Health Services Circular: Treatment of Impotence (HSC/1999/148)

APPROVAL PROCESS

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