One Gloucestershire
Transforming Care, Transforming Communities

Erectile Dysfunction

Introduction

Erectile Dysfunction (ED) is the persistent inability to achieve and maintain an erection that is sufficient to permit satisfactory sexual performance. It is a very common condition, and it is estimated that around 50% of all men between the ages of 40 and 70 are affected. ED can have a significant impact on quality of life of both patients and their partners.

The primary goal in the management of a patient with ED is to determine the cause and treat it when possible. Modifiable risk factors, including lifestyle or drug-related factors, may be addressed either before, or at the same time that other ED specific interventions are used. As a rule, ED can be treated successfully, but can only be cured in limited circumstances, i.e. psychogenic ED, post-traumatic ED in young patients, and hormonal causes for ED (e.g. hypogonadism and hyperprolactinaemia). Most men with ED will be treated with therapeutic options that are not cause specific, allowing a structured treatment strategy to be adopted.

1. Initial Patient Assessment – Take a History

Medical - Check for co-morbidities and any previous trauma or surgery. Establish if there is a history of abnormal bending when erect, a filling defect i.e. rigidity/not full erection, or difficulty with penetration. Ensure complaint is not premature ejaculation

Sexual - Clarify onset and duration of ED, relationship issues, loss of desire

Psychosocial - Asses stress, life changes, and anxiety

Reversible risk factors - Check for anabolic steroid use, smoking, alcohol, illicit drugs, prescribed medications, cycling

Likely primary psychogenic cause if:

- Symptoms variable
- Sudden onset
- Presence of early morning, nocturnal, spontaneous or self-stimulated erections

Likely primary organic cause if:

- Symptoms constant
- Gradual onset
- Absence or altered early morning, nocturnal, spontaneous or self-stimulated erections

Referral Criteria

Admit to hospital if there is priapism

Refer to Urology

- Young men who have always had difficulty obtaining or maintaining an erection
- Men with a history of trauma, if an abnormality of the penis or testicles is found on examination

Refer to Endocrinology/Andrology

- Hypogonadism (characterized by abnormal testosterone, FSH, LH or prolactin levels)

Refer to Cardiology

- CV disease that would make sexual activity unsafe

Refer to Psychosexual services

- If severe distress is suspected.
  The following criteria should be taken into account:
  - significant disruption to normal social and occupational activity
  - marked effect on mood, behaviour, social and environmental awareness
  - marked effect on interpersonal relationships

Consider referral for psychological assessment

- Men with a psychogenic underlying cause of ED

2. **Carry Out Investigations for Underlying Disease**

- Fasting blood glucose & HbA_1C (HbA_1C needs to be in normal range)
- Lipid profile
- eGFR
- LFTs (Gamma GT if indicated)
- Total serum testosterone (morning sample) if low (<12nmol/L) repeat sample after 2-3 weeks and refer to endocrinology if consistently low
- Prolactin – check if patient complains of lack of desire
- CV risk
- BP
- BMI
- HR and rhythm
- External genitalia
- Secondary sexual characteristics
- Lower limb pulses

3. **Ensure 'curable' causes of ED are treated** (refer to specialist services as appropriate) e.g. Hormonal, post-traumatic, arteriogenic ED in young patients, psychological causes, partner sexual problems, radical prostatectomy and drug-induced ED.

4. **Review medications which are known to cause ED**
   - Antihypertensives. (β-blockers, verapamil, methyldopa)
   - Diuretics (thiazides, spironolactone)
   - Cardiac glycosides (digoxin)
   - Antidepressants (SSRIs, TCAs, MAOIs, lithium)
   - Antipsychotics (neuroleptics)
   - Antiandrogens
   - H_2 antagonists (cimetidine & ranitidine)
   - Recreational drugs

5. **Advise on lifestyle changes and risk factor modification**
   e.g. weight loss, smoking cessation, reduced alcohol consumption, increased exercise and stress management.
   For men who cycle more than 3 hours/week, encourage a trial period without cycling to see if this improves their erectile function.

6. **Provide education and counselling to patients and partners**
   Identify patient needs and expectations

7. **Offer conjoint psychosocial and medical treatment**
   See overleaf for medical treatment guideline

Primary Care Medical Management of Erectile Dysfunction

1st line PDE5 inhibitor: Generic* Sildenafil 50mg on demand

Dose can be increased to 100mg according to response or reduced to 25mg if required e.g. if eGFR <30ml/min or in hepatic impairment (manufacturer advises to avoid in severe hepatic impairment)

Provide instructions on use and counselling

- Should be taken ~1hr prior to sexual activity
- Duration of action ~ 4hrs
- Possible interaction with food resulting in delayed absorption
- Ensure patient understands that PDE5i's are not initiators of erection and sexual stimulation is required.

Assess therapeutic outcome
Erectile response, side-effects and patient satisfaction with treatment
Assess use of treatment
If needed provide instructions and counselling. Ensure patient understands that PDE5i's are not initiators of erection and sexual stimulation is required.
Consider re-trial
If there is no response after at least six (preferably eight) doses of an oral PDE5 inhibitor at a maximum tolerated dose with sexual stimulation, a second line PDE-5 inhibitor should be used. (~40% of men discontinue the 1st line PDE5 because of lack of efficacy).

2nd line PDE5 inhibitor: Generic* Tadalafil 10mg on demand

Dose can be increased to 20mg according to response.
Max dose 10mg if eGFR < 30ml/min and hepatic impairment
(nb. manufacturer advises to avoid in severe hepatic impairment)

- Should be taken at least 30 mins prior to sexual activity
- Duration of action ~36hrs
- Can be taken with or without food
- Useful treatment option if patient is anxious about timing relative to intercourse
- Patients must meet NHS criteria for ED medication. **For those not meeting NHS criteria a private prescription can be offered.**
- The DoH recommends that **ONE TREATMENT PER WEEK** is sufficient for most patients. See also quantity of supply on NHS prescription.

Assess therapeutic outcome and use of treatment. (See above)
If unsatisfactory response, refer to specialist services
See also general Referral Criteria

If a PDE-5 inhibitor is contraindicated

E.g.

- Use of nitrates
- Recent MI
- Recent stroke
- Unstable angina
- Non-arteritic anterior ischaemic optic neuropathy
- Hypotension
- if vasodilation of sexual activity is not recommended

Consider a trial of:

Alprostadil Cream (Vitaros®)

Usual dose 300mcg, (can be reduced to 200mcg if the patient experiences local side-effects).

Administration:

- Use 5-30 mins prior to intercourse
- Supplied as single dose containers (discard after use)
- The tip of the container should be placed over the opening of the penis and the plunger pushed down until all the cream is expelled into the penis opening and surrounding skin. The penis should then be held upright for 30 seconds to allow the cream to penetrate
- Nb: The tip of the container should NOT be inserted into the opening of the penis
- Duration of affect is 1-2 hrs
- Maximum frequency is once per 24hr period and no more than 2-3 times per week

The initial prescription should be for 1 pack of 4x single doses, after which the patient should be reviewed to assess treatment effect prior to further prescriptions being provided
For Further Information See the SPC

* Generic sildenafil can be provided to all patients on the NHS, regardless of the cause of ED, patients who require other treatments must meet NHS criteria. Those with severe distress who require alternative treatments should be referred to specialist services. Use of branded sildenafil (Viagra®), tadalafil (Cialis®) or branded generics of these drugs is not recommended; they offer no advantage over the generic product but are considerably more expensive.

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Approved by: One Gloucestershire Medicines Optimisation Group September 2021
Review date: September 2024

Secondary Care Medical Management of Erectile Dysfunction

Treatment of ED in Patients Post Radical Prostatectomy (RP) / Radical Cystectomy/ Penile Plication Procedure for Peyronie's

ED is a common complication following prostatectomy due to cavernosal nerve damage, causing hypoxia, apoptosis, venous leak and fibrosis of the corpora cavernosa. Although there is evidence that, following an initial loss of erectile function, spontaneous improvements will occur in a proportion of men without specific intervention, most men who undergo radical treatment for prostate cancer experience ED and this is a cause of distress for the majority.

The Cheltenham Urology Department will initiate management of these patients post op with a specialist review in clinic to be taught Vacuum pump followed by a 3-month review in a specialist andrology clinic.

For those who have missed this pathway:

1st line: Generic Sildenafil on demand

2nd line: Generic Tadalafil 20mg on demand

3rd line: Vacuum Pump
May be Suitable for Patients Who:

- Do not respond to PDE5 inhibitors or other treatments.
- Require non-invasive, non-drug treatment. e.g. older patients who have certain co-morbidities and infrequent sexual intercourse.

Referral to a specialist required for assessment and treatment initiation. Include training for correct use. Supply first device.
Efficacy (in terms of producing erection satisfactory for intercourse), is reported to be up to 90% regardless of the cause of ED. However, satisfaction rates vary considerably.
Long term use of devices decreases to 50-64% after 2 years. Most men who discontinue use do so after 3 months, leading to potential waste.
Safety: Tension rings should not be worn for more than 30mins and European Association of Urology states that devices should not be used in patients with bleeding disorders or taking anticoagulants.

4th line:

- **Alprostadil Cream (Vitaros®)**
- **Alprostadil Intracavernous injection (Caverject®)**
- **Aviptadil / Phentolamine Intracavernous injection (Invicorp®)**

Requests to GPs to provide NHS Prescription treatment for Erectile Dysfunction Treatment fall within the NHS criteria, which may be found in Part XVIIIB of the Drug Tariff- Drugs, Medicines and Other Substances that may only be ordered in certain circumstances. https://www.nhsbsa.nhs.uk/pharmacies-gp-practices-and-appliance-contractors/drug-tariff