Erectile Dysfunction

Introduction

Erectile dysfunction (ED) may be defined as persistent failure in the adult male to sustain adequate erection for vaginal penetration.

Causes of ED

Most common:

- Psychogenic
- Vasculogenic: hypertension, hyperlipidaemia, diabetes mellitus, cardiovascular disease, smoking
- Drugs: beta-blocker, thiazides, digoxin, methyl-dopa, MAOIs, barbituates, benzodiazepines, spironolactone, ketoconazole, H2-blockers, fibrates, alcohol, heroin, methadone.

Less common:

- Testicular failure
- Renal or Liver failure
- Alcoholism
- Hyperprolactinaemia
- Hyper/hypothyroidism
- Neurological disease: multiple sclerosis, Parkinson's disease, stroke, tumours.
- Peyronie's disease
- Leriche syndrome

History and Examination

Note drug history. Perform a focussed physical examination including body weight, waist circumference, heart rate and blood pressure. Examine for thyroid goitre, abnormal body hair distribution, testicular size, gynaecomastia, peripheral pulses, bruits, peripheral neuropathy.

Investigations

Based on the physical examine and clinical history of the individual patient the following investigations should be considered. Testosterone has diurnal variation and for accurate interpretation samples should be collected at 9:00am.

Cause	Relevant test(s)
Testicular Failure/Hypogonadism	9am Testosterone, FSH, LH
Cardiovascular Disease/Hyperlipidaemia	Lipid profile
Diabetes Mellitus	Glucose, HbA1c
Liver Disease/Alcohol abuse	Liver function tests (LFTs), gammaglutamyl transferase (GGT), mean cell volume (MCV)
Renal Disease	Urea and Electrolyte profile (U&E), eGFR
Hyperprolactinaemia	Prolactin
Thyroid Disease	Thyroid Function Tests (TFTs)

Action on Tests

ED usually response well to a combination of lifestyle measures (weight loss, smoking cessation, reducing alcohol consumption) and drug treatment. Any identified underlying pathologies should be dealt with in accordance with appropriate guidelines.

Men with ED should be referred to a specialist in the following circumstances:

- Urology: young men who have always had ED; history of trauma to genital area, pelvis or spine; abnormality of penis or testicles; no response to maximum dose of at least two PDE-5 inhibitors.
- Endocrinology: if hypogonadism is suspected (abnormal serum testosterone)
- Cardiology: if the patient has cardiovascular disease that makes sexual activity unsafe or contraindicates PDE-5 inhibitor use.
- Mental Health Services: if an underlying psychogenic cause is suspected.

For sample types, collection information and reference ranges, please see the online test directory.

References:

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