

GYNAECOMASTIA

Gynaecomastia is a benign enlargement of the male breast which may be tender and painful. The term gynaecomastia is from the Greek words “*mastos*” and “*gynae*” which mean breast and woman respectively. It is common in both adolescents and adults.

Men with breast lumps, or generalised breast swelling, breast pain and nipple discomfort are being seen in increasing numbers in specialist breast clinics. In the vast majority of cases there is no known cause and this is termed “*idiopathic gynaecomastia*”

It may reflect an underlying imbalance in hormone physiology in which there is an increased oestrogen action relative to androgen action at the breast tissue level.

Of men presenting with lumps many are elderly and may be on multiple medication. It is estimated that between 10 – 20% of men with gynaecomastia have this condition as a result of a side effect to prescribed medication.

A list of all drugs known to have gynaecomastia as a possible side effect is given in **Lists 1, 2 and 3**

Much more rarely gynaecomastia may be secondary to other abnormalities and these include kidney or liver disorders, chromosomal abnormalities or endocrinological disorders. More rarely still, tumours arising from the pituitary gland, lungs, adrenal glands and testes may produce hormones that can stimulate male breast tissue to grow and enlarge.

In the Breast Clinic management is primarily the exclusion of breast cancer or other tumours and in our Clinic is by formal triple assessment. Our policy is to ultrasound all breast lumps in men and to add mammography in those over 40. When results are equivocal or suspicious of malignancy patients undergo ultrasound guided core biopsy. Endocrine evaluation of gynaecomastia is rarely productive and such testing is best done very selectively.

Most patients with confirmed gynaecomastia require reassurance only, but where symptoms merit there are some drugs that have been shown to alleviate symptoms at least partially. Those that have been described include Danazol, Tamoxifen, Raloxifene, Testalactone and aromatase inhibitors.

Where all else fails surgery provides a further option and the procedure of choice should be considered with great care on an individual basis.

LIST 1

Drugs that can cause gynaecomastia

Anti-arrythmic drugs

Digoxin

Anti-psychotic or neuroleptic drugs

Amisulpiride

Aripiprazole

Benperidlo

Chlorpromazine

Clozapine

Flupentixol

Fluphenazine

Haloperidol

Levomepromazine

Olanzapine
Prochlorperazine
Pericyazine
Perphenazine
Pimozide
Promazine
Quetiapine
Risperidone
Sertindole
Sulpiride
Trifluoperazine
Zotepine
Zuclopenthixol

Anti-hypertensive and other cardiac

Amlodipine
Diltiazem
Enalapril
Lisinopril
Methyldopa
Nifedipine
Nisoldipine
Prazosin
Verapamil

Anti-epileptic drugs

Carbamazine
Valproate acid

Diuretic drugs
Spironolactone
Bumetanide

Anti-depressant drugs

Amitriptyline

H2 receptor antagonist and proton pump inhibitors

Cimetidine
Famotidine
Lasoprazole

Omeprazole
Nizatidine
Ranitidine

Gonadorelin analogues

Buserelin
Goserelin
Leuprorelin
Nafarelin

Tripotorelin

Antibiotic anti-viral and anti-fungal drugs

Atazanavir

Darunavir

Efavirenz

Isoniazid

Ketoconazole

Stavudine

Cytotoxic drugs

Dasatinib

Estramustine

Imatinib

Immunosuppressant drugs

Ciclosporine

Anti-gout drugs

Allopurinol

Hormones

Cyproterone

Ethinylestradiol

Human chorionic gonadotrophin

Oestrogen

Testosterone

Hormone antagonist

Bicalutamide

Flutamide

Human menopausal gonadotrophins

Brand names

Menogen – combination drugs: follicle stimulating hormone and leutinising hormone

Menopur

LIST 2

Drugs that can cause gynaecomastia in alphabetical order

Atazanavir
Amlodipine
Allopurinol
Amitriptyline
Aripiazole
Amisulpiride

Bumetanide
Bicalutamide
Benperidol
Buserelin

Chorionic Gonadotrophin
Cyproterone
Carbamazepine
Ciclosporine
Chlorpromazine
Clozapine
Cimetidine

Darunavir
Diltiazem
Dasatinib
Digoxin
Dutasteride

Estramustine
Ethinylestradiol
Enalapril
Efavirenz

Famotidine
Flutamide
Flupentixol
Fluphenazine
Finasteride

Goserelin

Haloperidol
Human Chorionic Gonadotrophin

Isoniazid
Imatinib

Lanzoprazole
Lisinopril
Leuprorelin

Levomepromazine

Methyldopa

Mitotane

Menogan (brand name)

Menopur (brand name)

Nisoldipine

Nifedipine

Nizatidine

Nafarelin

Oestrogen

Omeprazole

Olanzapine

Prazosin

Prochlorperazine

Pericyazine

Perphenazine

Pimozide

Promazine

Pipothiazine

Quetiapine

Risperidone

Resperidone

Ranitidine

Spirolactone

Stavudine

Sildenafil

Sulpiride

Sertindole

Testosterone and esters

Trifluoperazine

Triptorelin

Verapmil

Zuclopenthixol

Zotepine

Zidovudine

LIST 3

Drugs reported to cause gynaecomastia in isolated case reports.

Atorvastatin
Cetirizine
Clonidine
Fenofibrate
Fluoxetine
Gabapentin
Methotrexate
Paroxetine
Pregabalin
Rofecoxib
Rosuvastatin
Thalidomide
Theophylline