**DRUG INDUCED HYPERPROLACTINAEMIA: EVALUATION & REFERRAL PATHWAY**

**CHECK BASELINE PROLACTIN**

(before starting an antipsychotic drug known to cause hyperprolactinaemia1)

Take blood sample at least 1 hour after waking or eating

Normal level

Women < 530 mIU/litre

Men < 424 mIU/litre

Elevated level

Women ≥ 530 mIU/litre

Men ≥ 424 mIU/litre

Start the drug

Recheck prolactin if symptoms develop2

Normal level

Hyperprolactinaemia excluded

Elevated level

Prolactin < 2500 mIU/litre and no symptoms of mass effect3

Prolactin > 2500 mIU/litre or symptoms of mass effect3

**Discuss with or refer to Endocrinology**

Most likely drug-induced hyperprolactinaemia

Drug review by psychiatry team – options:

* Reduce dose
* Substitute
* Add aripiprazole

Prolactin persistently raised and symptomatic

At the time of referral please request:

TSH, FT4, FT3, cortisol, macroprolactin and:

**Females**: exclude pregnancy and send LH, FSH and oestrogen (only if not on contraception)

**Males:** send FSH, LH and testosterone

1. We suggest avoiding drugs known to cause hyperprolactinaemia in patients <25 years (who have not attained peak bone mass), women planning pregnancy, and patients with history of breast cancer, prolactinoma or osteoporosis.
2. Symptoms in premenopausal female: infertility, oligomenorrhoea, or amenorrhoea and galactorrhoea. Symptoms in male: reduced libido, erectile dysfunction, infertility, gynecomastia or galactorrhoea.
3. Symptoms of mass effect: headaches and/or visual impairment (loss of peripheral vision, reduced visual acuity, double vision).

**MEDICATIONS CAUSING HYPERPROLACTINAEMIA**

|  |  |
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| **Medication** | **Frequency of prolactin elevation\*** |
| **First generation antipsychotics** | |
| Chlorpromazine | +++ |
| Flupentixol | +++ |
| Fluphenazine | +++ |
| Haloperidol | ++ |
| Sulpiride | +++ |
| Trifluoperazine | +++ |
| Zuclopenthixol | +++ |
| **Second generation antipsychotics** | |
| Aripiprazole | - |
| Amisulpride | +++ |
| Asenapine | +/- |
| Clozapine | - |
| Lurasidone | + |
| Olanzapine | + |
| Paliperidone | +++ |
| Quetiapine | - |
| Risperidone | +++ |
| **Antidepressants** | |
| Amitriptyline | + |
| Clomipramine | +++ |
| Nortriptyline | +/- |
| SSRIs (Es/citalopram, fluoxetine, fluvoxamine, sertraline) | + |
| Others (Bupropion, mirtazapine, trazodone) | +/- |
| Venlafaxine | ++ |
| **Antiemetic and gastrointestinal** | |
| Metoclopramide | +++ |
| Domperidone | +++ |
| Prochlorperazine | + |
| **Antihypertensives** | |
| Verapamil | + |
| Methyldopa | ++ |
| Most antihypertensives including calcium channel blockers | +/- |
| **Opioid analgesics** | |
| Methadone, morphine, others | Transient increase for several hours following dose |

\* +++ = high; ++ = moderate; + = low; - = very low / case reports only.

Effect may be dose-dependent.



Additional supporting guidance

* Quick guide for patients and clinicians
* Management of drug induced hyperprolactinaemia

**References:**

Molitch, M.E. (2008) Drugs and prolactin. Pituitary, 11, pp. 209.

Molitch, M.E. (2005) Medication induced hyperprolactinemia. Mayo Clin Proc, 80, pp. 1050.

Coker, F., Taylor, D. (2010) ‘Antidepressant induced hyperprolactinemia’, CNS Drugs, 24, pp. 563.

Drugs for psychiatric disorders (2013) Treat Guidel Med Lett, 11, pp. 53

The Maudsley Prescribing Guidelines in Psychiatry, 12th edition (2015)

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