

FSRH CEU Statement: Contraceptive Options for Women with Prolactinoma

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Key Points

- ▶ Women with prolactinoma can use progestogen-only contraceptives.
- ▶ Women with microprolactinoma can generally use combined hormonal contraceptives ($\leq 30 \mu\text{g}$ ethinylestradiol).
- ▶ Hormonal contraception should be initiated in collaboration with a woman's endocrinologist and with arrangements for monitoring the prolactinoma.
- ▶ There is no known interaction between hormonal contraceptives and dopamine agonists used in the management of prolactinomas.

Background

A prolactinoma is a benign pituitary gland tumour that results in the over production of prolactin (hyperprolactinaemia).¹ Microprolactinomas are small and measure less than 10mm. Those measuring more than 10mm are known as macroprolactinomas.¹

Symptoms of prolactinoma are caused by too much prolactin or from the pressure of a macroprolactinoma on surrounding tissues. In women of reproductive age symptoms can include:

- ▶ Menstrual disturbances (oligomenorrhoea, amenorrhoea)
- ▶ Infertility
- ▶ Galactorrhoea
- ▶ Hypoestrogenism (e.g. vasomotor symptoms, dry vagina, etc)
- ▶ Headache
- ▶ Visual disturbance

What drugs are used in the treatment of prolactinoma?

Dopamine agonists (bromocriptine, cabergoline and quinagolide) are used in the treatment of prolactinoma.² These drugs are used to inhibit the production of prolactin and to shrink the tumour.

Can women with a prolactinoma use hormonal contraception?

As treatment for prolactinoma may help to restore fertility it is advised that women use contraception if they do not wish to become pregnant. Both the British National Formulary² and the Summary of Product Characteristics for cabergoline³ and quinagolide⁴ advise that a non-hormonal method should be used. The CEU can find no evidence to support the advice that only non-hormonal methods are appropriate.

Combined hormonal contraception (CHC) has in the past been avoided in patients presenting with prolactinoma. However, there is little evidence to support this practice.

A prospective cohort study followed up 16 women with hyperprolactinaemia who started using combined oral contraception (COC).⁵ After two years of COC use, there was a non-significant decrease in plasma prolactin (PRL) concentration. There was no apparent enlargement of prolactinoma in any of the subjects, although the radiological techniques used at the time of this study may have had insufficient resolution to identify small prolactinomas.

A cohort study of 21 women using a COC containing 35 µg ethinylestradiol (EE) and 2 mg cyproterone acetate found that basal concentrations of PRL increased significantly during the year of COC use and PRL concentrations were elevated 6 months after cessation.⁶

A descriptive study of 100 women using COCs (50 using 50 µg EE COCs and 50 using 30 µg COCs) showed that there was a significant elevation in serum PRL in both groups, with a more significant elevation in the 50 µg EE COC users.⁷

A cross-over study of 26 women using COCs containing 30 µg EE and 50 µg levonorgestrel (LNG) or 40 µg EE and 75 µg LNG reported that prolactin concentrations rose sporadically in some women, but there was no significant increase.⁸

Christin-Maitre *et al.* advocate that women presenting with microprolactinoma should be allowed to use current contraceptive pills containing 30 micrograms or less of EE, but they advise caution in cases of macroprolactinoma.⁹

Schlechte indicates that in women with microprolactinomas for whom fertility is not an issue, treatment with an oral contraceptive is less expensive and has fewer side effects than using dopamine agonists.¹⁰

The limited literature available suggests that progestogen-only methods are safe in women with prolactinoma.¹¹

Are there any known interactions between prolactinoma treatments and contraception?

No. Dopamine agonists are not known to interact with hormonal contraceptives and no interaction is listed in the BNF² or SPC^{3,4,12} for these products. The contraceptive efficacy of combined hormonal contraceptive and progestogen-only contraceptives will not be affected by use of such treatments.

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