Contraception in women with migraine or depression

Further basic information on this topic can be found at www.fptraining.org
Part 1
Migraine
Contents
Migraine

At the end of this session, participants will be able to understand and explain:

- Sex differences in epidemiology of migraine
- Prevalence of migraine
- Background of hormonal triggers for migraine
- Basics on diagnostic criteria for migraine
- WHO recommendation for CHC use in migraineurs
- The strength of the association between migraine and stroke
- When to stop CHCs in migraineurs
- Benefits and risks of non-hormonal contraceptive options for migraineurs


Ref 1: Global migraine prevalence was found to be 11.6% (95% CI 10.7–12.6%; random effects); 10.4% in Africa, 10.1% in Asia, 11.4% in Europe, 9.7% in North America and 16.4% in Central and South America. When the pooled cohort was stratified, the prevalence was 13.8% among females, 6.9% among males, 11.2% among urban residents, 8.4% among rural residents and 12.4% among school/college students. The result showed a pattern of rising global migraine prevalence.

Migraine affects around 10–15% of the population. After puberty the prevalence of migraine is two to three times higher in women than in men. In women, 50% of migraines are associated with the menstrual cycle.

Visual symptoms include:
- Blind spots (scotomas), sometimes outlined by simple geometric shapes.
- Zigzag lines that gradually float across the field of vision.
- Shimmering spots or stars.
- Changes in vision or vision loss.
- Flashes of light.

Sensory symptoms include:
- Feelings of numbness, typically felt as tingling in one hand or on the face.
- Difficulty with speech or language.
- Muscle weakness.

As a consequence of the risk of ischaemic stroke in migraineurs using CHCs and the potential negative effect of CHCs on the course of pre-existing migraine, identifying migraine and differing it from normal headache, when taking a patient history, is crucial.

For the gynaecologist it might not always be easy to differentiate normal headache from migraine, as women suffering from headache frequently do not know that they suffer from migraine; therefore, the gynaecologist should ask about typical symptoms. Using the criteria of the International Headache Society might help.

There is a multiplicative risk of CHCs and smoking on risk of ischaemic stroke in female migraineurs.

* OR significant
**WHO recommendation for CHC use in women with migraine**

<table>
<thead>
<tr>
<th>CHC use</th>
<th>Initiation</th>
<th>Continuation</th>
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</thead>
<tbody>
<tr>
<td>Migraine without aura</td>
<td>(Yes)</td>
<td>No</td>
</tr>
<tr>
<td>• Age &lt;35 years</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>• Age &gt;35 years</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Migraine with aura (WHO MEC category 4)</td>
<td>No</td>
<td>No</td>
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</tbody>
</table>

Stop CHCs in presence of the following features after CHC start:
• New migraine.
• Worsening of migraine.
• Aura in previous non-aura migraineurs.


- Several studies indicate the positive impact of the desogestrel 75 μg POP on migraine frequency and intensity. In addition, this pill does not elevate the risk of stroke.
- There is no evidence of a positive impact of the implant and DMPA on migraine, but neither method increases the risk of stroke.
- Copper IUDs have no impact on migraine.


There is good evidence that the POP has a positive impact on migraine in the majority of women. In addition, the risk of stroke is not elevated. The POP is therefore an important first-choice option in this condition.
Clinical observations in LNG-IUS users indicate that in women with hormone-related migraine headaches can worsen. This must be attributable to fluctuations in estrogen levels.
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Part 2
Depression
Contents
Depression

At the end of this session, participants will be able to understand and explain:

- Definition of depression
- Prevalence in Europe
- How not to miss depression in taking a history
- Potential effects of contraceptive methods on the course of depression in women with depression as a pre-existing condition
- Which contraceptives may cause depressed mood


**Prevalence**

Postpartum depression affects approximately 10% of women.

**Definition and diagnosis of depression** (source: Diagnostic and Statistical Manual of Mental Disorders, 5th ed.)

- Depression is a disorder that may make a person feel sad, empty or irritable, which may in turn affect the person's ability to function in normal activities.

- The **prevalence of depression in women of reproductive age** has been reported to be about 14%, and it is almost twice as common in women as in men.

- **Bipolar disorder** is characterised by depressive and manic or hypomanic episodes in which patients may experience unusual and abnormal patterns in mood, energy, activity levels and sleep. Bipolar disorder has an early age of onset, with the highest prevalence in the 18–29 year age group.

- The **prevalence of bipolar disorder in women** is between 1% and 2%, with a mean age of onset of approximately 20 years.
• **Prevalence of postpartum depression:** according to the National Institute of Mental Health, studies show that the childbearing years are when a woman is most likely to experience depression in her lifetime. Approximately **15% of all women** will experience postpartum depression following the birth of a child.

• **Recognise depression:** Depression is common but often overlooked (Ref 3). People with depression can be reluctant to seek help, even though effective treatments are available. This causes them unnecessary suffering and places a high burden on relatives and a high cost on society due to lost productivity. Depression is present in about 25% of people visiting family doctors, but health care professionals often miss it. About 50% of people with depression do not receive any form of treatment, owing to a combination of treatment avoidance due to shame and denial, a lack of services and/or the inability of staff to identify the problem.
Influence of hormones
Hormones do not typically initiate depression but can modify the course of depression. Therefore discuss their potential effects on mood.


Ref 1: The pill under investigation was (1.5 mg estradiol and 2.5 mg nomegestrol acetate). The study found that COC use was associated with small, but statistically significant, increases in mean anxiety (0.22; 95% CI 0.07–0.37; \(p=0.003\)), irritability (0.23; 95% CI 0.07–0.38; \(p=0.012\)) and mood swings scores (0.15; 95% CI 0.00–0.31; \(p=0.047\)) during the intermenstrual phase, but a significant premenstrual improvement in depression (−0.33; 95% CI −0.62 to −0.05; \(p=0.049\)). Secondary analyses showed that women with previous adverse hormonal contraceptive experience reported significantly greater mood worsening in the intermenstrual phase in comparison with healthy women (\(p<0.05\)). The proportion of women who reported a clinically relevant mood deterioration did not differ between those allocated to COCs (24.1%) or placebo (17.0%) (\(p=0.262\)).


Ref 2: This multivariate longitudinal analysis of 183 DMPA users and 274 non-users found an increased likelihood of reporting depressive symptoms among continuous DMPA users (OR 1.44; 95% CI 1.00–2.07). Discontinuers had elevated depressive symptoms prior to discontinuation (OR 2.30; 95% CI 1.42–3.70). **Depressive symptoms subsided after discontinuation** at subsequent visits relative to those in non-users.


Ref 1:
- Most studies of postnatal depression have been conducted in high income countries. However, one study conducted in 147 women from a South African peri-urban settlement found the rate of major depression at 2 months postpartum to be 34.7%, three times higher than in a British sample.
- Beck Depression Inventory (BDI-II) scores at 3 months were significantly higher in the DMPA arm than in the IUD arm (\( p = 0.002 \)) and, according to the BDI-II but not the Edinburgh Postnatal Depression Scale, more women in the DMPA arm had major depression at this time point (8 vs 2; \( p = 0.05 \)).
- The trial findings cannot be regarded as conclusive because of some limitations, but they may indicate that women with diagnosed postnatal depression should be counselled against use of DMPA.

Ref 2:
- Compared with use of non-hormonal contraception, DMPA use in the immediate postpartum period did not appear to predispose women to postnatal depression.
Contraception in women with depression
Conclusion: POC

Based on limited evidence and clinical experience:
• Progestin-only contraception (POC) might have a negative impact on the course of pre-existing depression
• Better options are CHCs, copper IUDs or permanent methods
• If no other option is available, the patient should be informed that mood may worsen and she should come back immediately if this happens (start a method which can easily be stopped)
• This is also true for the LNG-IUS
Case 1: Depression

- 38-year-old teacher, migraine with aura (eight attacks/month), hormonal component
- Many migraine treatments have been unsuccessful
- Contraception: condoms
- Two children
- Was started on the desogestrel-only pill to stop hormone withdrawal, improve migraine and for contraception
Case 1: Depression

- Six weeks later, the patient reported that she felt she was becoming depressed
- She stayed in bed all day and cried
- Her neurologist had started her on an antidepressant 3 days earlier
- Her migraine had strongly improved for the first time in years
- Recommendation: Stop the POP (however, no other option to treat her migraine with a POC is available)
- Her mood improved within 3 weeks after stopping the POP
Case 2: Depression

- 36-year-old woman in stable relationship
- Heavy smoker
- Would be happy without menstruation
- Decided to have the LNG-IUS, after counselling
In retrospect:

• The patient’s history was not well taken: the doctor did not know that she suffered from depression, as she had not mentioned it. A medication history had also not been thoroughly taken.

• The patient was not informed and counselled appropriately about the systemic effects of the LNG-IUS.

• The LNG-IUS should have been removed at the second visit when the patient reported mood problems.