Current Clinical Approach: Menstrual Migraine

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What is a menstrual migraine?

Menstrual migraine can be divided into true menstrual migraine and menstrual-related migraine. True menstrual migraine attacks occur only at the time of menstruation. Menstrual-related migraine is a far more common presentation. This is characterized by attacks that occur both in a pattern related to menses as well as at other times of the menstrual cycle. Menstrual-associated attacks typically occur in the 2 days before or 3 days after menses onset.

Menstrual migraine generally begins with menarche or in adolescence. Although experiences vary, menstrual migraine commonly improves during pregnancy and may worsen during the perimenopausal period. While many assume migraine resolves during menopause, there is widespread variability and the clinical reality is that some women will improve while others will experience no change or an increase in symptoms.[1]

How do you diagnose menstrual migraine?

Migraine is a clinical diagnosis, meaning there is no diagnostic test to verify migraine. A comprehensive history and examination is needed to rule out secondary headache disorders and confirm criteria for migraine. Once this diagnosis is made, menstrual migraine is recognized if the attacks are occurring 2 days before or within 3 days of cycle day 1 in 2 out of 3 menstrual cycles. Assessing migraine patterns over time is often needed to diagnose menstrual migraine. These attacks are often longer lasting and more difficult to treat, hence the need for an effective abortive plan. Patients often report a change in their typical menstrual migraine pattern through pregnancy, breastfeeding, perimenopause, and menopause. Most patients have additional migraine attacks throughout their cycle which can make this diagnosis elusive.

Steps to diagnosing menstrual migraine:

- Assess for primary migraine
  - A simple tool for migraine diagnosis is the Lipton 3-item ID migraine screener. Answering yes to 2 of the 3 questions gives a 93% positive predictive value of a diagnosis of migraine.[2] (Table 1)

Table 1: During the last three months, did you have any of the following with your headaches?

Item	Yes / No
You felt nauseated or sick to your stomach when you had a headache?	Yes ☐ No ☐
Light bothered you (a lot more than when you don't have headaches?)	Yes ☐ No ☐
Your headaches limited your ability to work, study or do what you need to do for at least one day?	Yes ☐ No ☐

- Rely on detailed clinical history and look for a pattern of migraine attack
  - A headache diary is a useful tool for tracking migraine attacks and acute medication use
  - Canadian Migraine Tracker app was made by Migraine Canada and is available for patients to download for free

People with menstrual migraines typically experience:[3]

- Longer duration of migraine attacks
- Nausea
- Increased photophobia and phonophobia

How to effectively treat menstrual migraine?[3]

The first step in developing a treatment plan is to quantify the duration and severity of attacks as well as the functional implications to the patient.

The Canadian Headache Society (CHS) acute migraine treatment guidelines recommend acetaminophen or NSAIDs for mild to moderate attacks.[3] If over the counter options are ineffective, prescription NSAIDs such as naproxen sodium and diclofenac potassium are available to try in immediate release tablet formulations. Diclofenac potassium is also available as a water-soluble buffered powder with a T_{max}* of ~15 minutes, suggesting the potential for a rapid onset of effect.

For moderate to severe migraine attacks or when NSAIDs alone have failed, the CHS recommends an NSAID with triptan rescue or triptan alone.[3] There are currently 7 different triptans on the market and one combination triptan/NSAID. (Table 2) There is no clear data for superiority of one triptan over another and patients should try different triptans if one is ineffective or not tolerated. If attacks are long-lasting, consider using a triptan with a longer half-life such as frovatriptan or naratriptan.

Table 2: Triptan and triptan combinations available in Canada

Name (Brand name)	Available Formats
Almotriptan (Axert®)	tablet
Eletriptan (Relpax®)	tablet
Frovatriptan (Frova®)	tablet
Naratriptan (Amerge®)	tablet
Rizatriptan (Maxalt®)	tablet, orally dissolving tablet
Sumatriptan (Imitrex®)	tablet, injection, nasal spray
Zolmitriptan (Zomig®)	tablet, orally dissolving tablet, nasal spray
Sumatriptan/Naproxen sodium (Suvexx®)	tablet

CLINICAL PEARLS

- Menstrual migraine diagnosis and treatment requires a detailed clinical history to elucidate patterns
- Education on timing of medications is crucial for cyclical menstrual migraines
- Consider a combination triptan + NSAID strategy if acute monotherapy has failed or if cycles are irregular, making mini-prophylaxis impractical
- The best triptan choice is the one that works for the patient
- It is important to be mindful of the potential of medication overuse headache if aggressively treating during menses – don't forget to ask about OTC use!

For patients who are not achieving consistent resolution of their migraine attack with a monotherapy approach, they may need a combination of acute medications. The combination of an NSAID and triptan is useful for these refractory migraine attacks.[3] All triptans can be combined with naproxen for migraine and menstrual symptom relief. These can be taken as 2 separate medications or in a combination tablet of sumatriptan/naproxen.

Will OC use help with menstrual migraine?

There is no conclusive evidence or recommendations for the use of oral contraceptives as a treatment for menstrual migraines. The responses are often highly variable between patients.

Timing of Treatment

Similar to a non-menstrual migraine, patient education on timing of treatment is essential. People with migraine should be instructed to "hit hard, hit fast" and take their acute migraine treatment early in the attack.[3]

There is another approach termed "mini-prophylaxis". This refers to a strategy whereby the patient starts their acute treatment prior to the onset of their expected menstrual migraine attack and continues for 2 to 4 days. This method relies on regular menstrual cycles and consistently predictable menstrual migraine onset.

Medication Overuse Headache

All people with migraine should be made aware of the risk of medication overuse headache and how it can be avoided. This is particularly important in people who are being treated aggressively for menstrual migraine with mini-prophylaxis or who have attacks at other times during their cycle. The limits to keep in mind are no more than 10 days of a triptan or 15 days of NSAID use per month. Always ask about any OTC medications being used to treat their migraines as people will often overlook OTC use. Remind patients to track their migraine symptoms days, menstrual cycle, and acute treatment usage to improve their quality of care. The Canadian Migraine Tracker is a great app to recommend to your patients.

1. Lauritsen, C.G., Chua, A.L. & Nahas, S.J. Current Treatment Options: Headache Related to Menopause—Diagnosis and Management. Curr Treat Options Neurol 20, 7 (2018). https://doi.org/10.1007/s11940-018-0492-7
2. Lipton RB et al. Migraine prevalence, disease burden, and the need for preventive therapy. Neurology. 2007;68:343-349
3. Abdullah M et al., Comparison between menstrual migraine and menstrual-unrelated migraine in women attending gynecology clinics, 2020 Oct;12(10);e10976
4. Canadian Headache Society Acute Migraine Treatment Guideline Development Group, Canadian Headache Society Acute Drug Therapy for Migraine Headache, Can J Neurol Sci 2013;40(suppl 3):S1-S80.

* T_{max} = time to maximum plasma concentration

How to trial a triptan:

- Optimize efficacy of triptan
  - Counsel patients to treat early in the migraine attack
  - Trial for at least 3 attacks to determine effectiveness

> "The best triptan choice is the one that works for the patient."