Healthcare Professional Handout

Domperidone Use in Breastfeeding/Chestfeeding

Domperidone has been used off-label to help increase milk supply in people who are breastfeeding/chestfeeding. Although anecdotal reports suggest notable benefit, current evidence to support use is limited.

Summary: Providers should consider the risks and benefits of domperidone for increasing milk supply while supporting patient values and preferences.

- **Start with non-medication strategies.** Non-medication strategies to increase production should be considered prior to initiating a medication.[1,7] Breastfeeding/Chestfeeding technique should be assessed with support and education offered to parents.[1] Here is a partial list of Saskatchewan Lactation Consultants. International Board-Certified Lactation Consultants (IBCLC) may work in hospitals, in home visiting programs, at local public health offices, in private practice, or may have breastfeeding/chestfeeding centers across the province.

- **Risks and withdrawal:** A 2023 Health Canada review found a link between the sudden discontinuation of domperidone and psychiatric withdrawal symptoms when used to promote lactation. Health Canada's black box warning about cardiovascular events advises healthcare providers about QT prolongation and Torsades de Pointes (TdP).
- **Bottom Line:** Benefits and risks of domperidone to increase milk production are not well-studied. Some breastfeeding/chestfeeding experts suggest that, when all other lactation support has been exhausted, domperidone may be considered in individuals who:
    - are otherwise healthy,
    - do not have a history of cardiac disease or risk factors for QT prolongation and TdP, and
    - are well informed and educated on domperidone use.

Mechanism of Action and Use: Domperidone is a peripheral dopamine antagonist that is not expected to cross the blood brain barrier.[2] Health Canada has approved domperidone to improve upper gastrointestinal motility to treat GI motility disorders and nausea/vomiting associated with dopamine-agonist anti-Parkinson agents.[2,3] Galactorrhea can be a side effect in some individuals due to an increase in prolactin. Because domperidone has the potential to increase prolactin, it has been used off-label to increase milk supply. Prolactin is particularly important in establishing lactation during lactogenesis II but is less important for the maintenance of lactation.[4]

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Cardiac Risk Assessment:

There are several factors to consider when assessing TdP risk: it is suggested that a combination of factors is required to induce TdP.[5]

- Patient Characteristics for QT Prolongation and TdP: There are cardiac, metabolic, and other risk factors to be assessed. Here is a link to an assessment tool from RxFiles: QT Prolongation and Torsades de Pointes: Drugs and Sudden Death.
- Additive Risk of Medications: Other medications have QT prolongation and TdP risk. Combining these medications increases these risks. Medications associated with QT prolongation are listed in rxFiles and crediblemeds.org.
    - Prior to initiating domperidone in patients with multiple QT prolonging medications investigate QT length with electrocardiogram (ECG) and continue to monitor.
- Domperidone dose: Dosages greater than domperidone 30 mg daily may increase the risk of arrhythmias and sudden cardiac death.[3]
- Drug Interactions: Domperidone is metabolized by CYP3A4, N-dealkylation and hydroxylation. Other medications can alter domperidone metabolism and may require dosing adjustments.

Contact medSask at 1-800-667-3425, 306-966-6340 or druginfo@usask.ca for support in assessing risk factors and drug interactions.

Psychiatric Risk Assessment:

- Recent case studies indicate that some people using domperidone experience serious adverse reactions when they stop, including:
    - psychosis and suicidal feelings, and
    - reemergence of obsessive-compulsive disorder and major depressive disorder in a patient with a previous history.[6]
- Health Canada Safety Review of 9 relevant case reports found that psychiatric withdrawal side effects were associated with doses greater than 30 mg per day and when domperidone had been used for longer than 4 weeks. The review noted that symptoms were mostly refractory to conventional depression/anxiety medications, and that tapering regimens helped manage withdrawal symptoms.
- Ensure all individuals have support and follow up during postpartum, while breastfeeding/chestfeeding, and while initiating and stopping galactagogues.

Dosing Considerations:

There is no official established dosing for enhancing lactation.[6,7]

- What we know from the literature:

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- Most published studies have used domperidone in a dosage of 10 mg 3 times daily for 4 to 14 days.[6]
- In two small studies, women who failed to respond to the low dosage (30mg daily) did not respond to a higher dosage (60mg daily).[6]

In individuals that are feeding regularly, have support from an IBCLC, and still do not have enough supply, initiate domperidone 10mg TID for 1-2 weeks and then assess the response.

- Timelines to respond vary between participants. Some participants respond within 24 hours, 2 weeks, or never respond.[1,8]
- A dose increase may be considered based on response. A maximum dose (according to expert opinion) would be 20 mg QID with frequent monitoring.[7,9]

Effectiveness:

Effectiveness has not been well established.

Response to domperidone should be decided on an individual basis, ideally with an IBCLC involved. Increased milk production may look like:

- Infant weight gain and increased output (wet diapers and pooing often)
- Infant is feeding well and often, and takes an increased volume of milk

The studies that have assessed effectiveness are generally small (most < 30 participants), of short duration (most 10-14 days), and of low quality (lack of control, outcomes not clinically significant).[6] A large Canadian trial of 90 mothers of preterm infants reported domperidone was effective in increasing milk volume, but volumes achieved were not large.[10] In separate trials reporting changes in mean milk volume, increases of 44.5%, 96% and 267% have been reported, although these studies do cite important limitations.[6]

Pumping *may* be encouraged to maximize effectiveness and assess benefits. Pumping will not be best practice in all individuals, especially those parents who:

- do not respond well to the pump,
- are having success at the chest and other measures of response are evident, and/or
- do not have access to a high-quality pump.

Adverse Effects:

Affecting the Patient:

- Most common[6]: GI symptoms, breast engorgement, weight gain, headache, dizziness, irritability, dry mouth, and fatigue.
- Long QT_c symptoms[1,6]: dizziness, palpitations, bradycardia, shortness of breath, seizures, or fainting.

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- Extrapyramidal symptoms[11]: restlessness, inability to sit still, involuntary muscle contractions, tremors, stiff muscles, and involuntary facial movements. Extrapyramidal symptoms are more likely at doses more than the maximum recommended.

Affecting the Baby:

- Domperidone is considered compatible with breastfeeding/chestfeeding. A small amount of domperidone is present in human milk.[3,6,8]
    - Relative infant dose (RID) = 0.12% when domperidone taken at doses of 10-20 mg three times daily[6]. A RID of < 10% is considered acceptable.
- Most available studies did not evaluate adverse events in breastfed/chestfed infants following maternal use of domperidone.[6] Anecdotally and in the few studies that examined adverse effects in breastfed/chestfed infants, no adverse effects related to domperidone use were reported.

Discontinuation of Domperidone:

Once milk supply is established, patients should:

- Attempt to taper off the medication. Most published studies used the medication for 4-10 days.[6] Taper by 1 pill every 4-7 days.[1]
- Taper slowly to ensure adequate milk supply and to minimize withdrawal symptoms.
- Monitor for signs and symptoms of withdrawal (e.g., insomnia, anxiety, depression, panic attacks and other mental health changes).
- Adjust taper according to patient response.

In case studies, withdrawal symptoms were experienced with abrupt discontinuation. A slow taper of domperidone is necessary even when an individual desires sudden discontinuation of breastfeeding/chestfeeding. At higher doses, tapering can take months and should be based on patient response.

Weaning: As breastfeeding/chestfeeding ends, there is a decrease in prolactin and oxytocin – hormones that contribute to feelings of calm, love, and contentment.[12] While weaning, patients may experience changes in their mood and a decreased sense of wellbeing which may be heightened while stopping domperidone.[12]

Reporting a Side Effect: There is a lack of information on withdrawal symptoms associated with domperidone. If your patient has this experience please report to Canada Vigilance.

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