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Domperidone as a galactagogue

Some years ago I wrote a factsheet for the Breastfeeding Network on the use of domperidone as a galactagogue when the recommendations for the use of domperidone changed https://www.breastfeedingnetwork.org.uk/domperidone/. The MHRA and EHRA recommended that domperidone be prescribed only in limited situations and at a maximum dose of 10mg three times a day for 7 days and not for breastfeeding mothers https://www.gov.uk/drug-safety-update/domperidone-risks-of-cardiac-side-effects.

Domperidone has long been used as a galactagogue to increase milk supply. Most of the evidence from studies lies with use to increase lactation after premature delivery but can be used later where breastfeeding got off to a difficult start such as separation of mother and baby. The research studies on domperidone and use to increase milk supply can be found in the BFN link.

In my experience it had been used when adequate breastfeeding support had not been given and when feeding was not effective or frequent enough to stimulate supply. This should always be the first intervention and should be happening at every professional contact with a breastfeeding mother.

When should domperidone not be used ?

Domperidone interacts with other medication and should not be used:

- before assessment by someone skilled in breastfeeding support alongside expressing both breasts, at least 8-10 times in 24 hours including overnight
- where either mother or baby has any evidence of cardiac abnormalities and specifically arrhythmia
- where either is receiving other medications known to prolong QT interval or potent CYP3A4 inhibitors e.g., quinolone antibiotics, ketoconazole, fluconazole, macrolide antibiotics, SSRI antidepressants (risk low with most commonly used (Funk 2013) tricyclic antidepressants, salbutamol (https://ggcmedicines.org.uk/media/uploads/ps_extra/pse_21.pdf)
- where severe hepatic impairment has been identified in mother or baby

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- where either mother or baby has high or low levels of potassium, or low levels of magnesium (https://ggcmedicines.org.uk/media/uploads/ps_extra/pse_21.pdf)

Mothers should be counselled as to the adverse effects of domperidone (abdominal cramping, dry mouth, depressed mood and headache) and advised to report any changes in their baby's behaviour (https://bnf.nice.org.uk/drugs/domperidone/#side-effects).

Are there adverse effects of domperidone on babies exposed through their mother's milk?

Hale data(2022) : milk plasma ratio 0.25% (<1 regarded as compatible with breastfeeding), plasma protein binding 93% leaving only 7% which can pass into milk, oral bioavailability 13-17% because of extensive first pass metabolism, relative infant dose 0.01%-0.35% (< 10% regarded as compatible with breastfeeding.

Analysis of studies not complete but indicative of low risk to babies of domperidone passing to baby and would be grounds for use in breastfeeding to be reconsidered by EHRA and MHRA.

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	Study	type of study	n	outcome
1	Osadchy 2012	3 RCT	78	No maternal or neonatal adverse events were observed in any of the trials.
2	da Silva 2001	placebo controlled study	16 (7 active 9 placebo)	no reported side effects attributable to domperidone
3	Campbell-Yeo 2010	placebo controlled study	46	No significant adverse events were observed among mothers or infants.
4	Petraglia 1985	placebo controlled study	17 active, 15 placebo	lack of any side-effects
5	Knoppert 2012	study to determine most effective dose		no data on side effects
6	Wan 2008		6	The amount of domperidone that transfers into milk was extremely low, and infant exposure via breastfeeding was not considered to be significant.
7	Ingram 2011	comparison domperidone and metoclopramide	80	Adverse effects only reported in mothers
8	da Silva 2004			Because of extensive first pass and gut-wall metabolism, oral bioavailability is only 13%– 17%.1

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Higher doses of domperidone to increase milk supply?

Some breastfeeding experts have used significantly higher doses of domperidone to stimulate lactation and continued use long term without reported adverse effects (Newman J, Polokova A What Doctors Don't Know About Breastfeeding 2022)

Tapering off dose

There are no studies that provide an evidence base on how long to continue domperidone in the case of inadequate lactation (Academy of Breastfeeding Medicine (ABM) 2018 Anecdotally, some women feel that their supply cannot be maintained without the drug, while some can reduce the dose but not stop altogether. It is possible that domperidone is acting as a placebo to boost their confidence – we do not know and should admit the limitations of the research.

After a slow withdrawal from domperidone, one study found no significant increase in formula supplementation suggesting that once sufficient milk production is established, it is maintained even without the use of domperidone (Livingston 2007).

Knoppert (2012) showed that in 3 out of 4 women who had taken domperidone for 4 weeks at full dose, 2 weeks at reducing dose, milk supply was maintained. Although gradual weaning from the drug has become standard, there is little published evidence apart from the reports and data is based on the experience of breastfeeding specialists.

Withdrawal

Drug withdrawal symptoms consisting of insomnia, anxiety, and tachycardia were reported in a woman taking 80 mg of domperidone daily for 8 months as a galactogogue who abruptly tapered the dose over 3 days (Papastergiou 2013) Another mother (Seeman2015) took domperidone 10 mg three times daily for 10 months as a galactagogue and stopped abruptly. After discontinuation, she experienced severe insomnia, severe anxiety, severe cognitive problems and depression. A third postpartum woman (Doyle 2018) began domperidone 90 mg daily, increasing to 160 mg daily to increase her milk supply. Because her milk supply did not improve, she stopped nursing at 14 weeks and began to taper the domperidone dosage by 10 mg every 3 to 4 days. Seven days after discontinuing domperidone, she began experiencing insomnia, rigors, severe psychomotor agitation, and panic attacks. She restarted the drug at 90 mg daily and tapered the dose by 10 mg daily each week. At a dose of 20 mg daily, the same symptoms recurred. She required sertraline, clonazepam and reinstitution of domperidone at 40 mg daily, slowly tapering the dose over 8 weeks. Three months were required to fully resolve her symptoms. In a fourth case (Manzouri 2017), a mother took domperidone 20 mg four times daily for 9 months to stimulate breastmilk production. She stopped breastfeeding and domperidone at that time. Two weeks later, she presented with insomnia, anxiety, nausea, headaches and palpitations. The drug was restarted at a dosage of 20 mg three times daily and began to taper the daily dosage by 10 mg every week, but after one week she complained of insomnia. Tapering was reduced to 5 mg every week, but whenever she stopped the drug, symptoms returned. She was able to discontinue domperidone after tapering the daily dosage

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by 2.5 mg weekly over 10 months A fifth case (Sharma 2022) of a mother with a history of bipolar disorder and major depression developed severe anxiety, a recurrence of depression and obsessive-compulsive disorder 6 days after abruptly discontinuing domperidone 120 mg daily that she was taking as a galactogogue. Three days later, she restarted domperidone 120 mg daily and tapered her daily dose by 10 mg at weekly intervals. She took no other medications. Two weeks after discontinuing domperidone, she had signs of only mild mood disorder. Hale (2022) reports an increase in calls to InfantRisk reporting problems with withdrawal after high dose and long-term use. This should in my opinion be discussed with the mother before prescription of the medication.

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