

Breastfeeding and Medication



Breastfeeding and neuropathic pain

Unlike most other types of pain, neuropathic pain doesn't usually get better with common painkillers, such as paracetamol and ibuprofen. The three drugs normally used to treat this type of pain are amitriptyline, gabapentin and pregabalin.

Amitriptyline

Amitriptyline has been used for many years even in breastfeeding women as an antidepressant as well as to treat neuropathic pain. Mothers taking amitriptyline should be counselled to take care with co-sleeping as their natural responses will be altered.

Amitriptyline undergoes extensive first-pass metabolism. It is extensively bound to plasma proteins. The levels measured in breastmilk are low because of this.

Bader and Newman (1980) studied a mother who took amitriptyline 100 mg daily for six weeks post-partum. She had breastmilk levels of amitriptyline and its metabolite nortriptyline of 151 and 59 µg per litre, respectively. This was calculated to represent 1.8% of the maternal weight-adjusted dosage. There were no reports of adverse effects on the baby. Misri and Sivertz (1991) followed-up a group of 20 breastfed infants whose mothers were taking a TCA for up to three years and found no adverse effects on growth and development even at a dose of 150 mg daily. Brixen-Rasmussen et al. (1982) studied a 3-week-old breastfed baby who had undetectable serum amitriptyline (<5 µg per litre) and nortriptyline (<15 µg per litre) during maternal amitriptyline use of 75 mg daily. Relative infant dose is quoted as 1.5% (Hale 2017 online access). The BNF states that the amount in breastmilk is too small to be harmful.

Compatible during breastfeeding due to extensive plasma protein binding and first-pass metabolism.

References

- Bader TF, Newman K, Amitriptyline in human breastmilk and the nursing infant's serum, *Am J Psychiatry*, 1980;137(7):855–6.

©Dr Wendy Jones Pharmacist Breastfeeding and Medication

www.breastfeeding-and-medication.co.uk

September 2018 *The information on this sheet is based upon my professional experience as a pharmacist with a specialised interest in the safety of drugs in breastmilk, supported by evidence from expert sources. However, I cannot take responsibility for the prescription of medication which remains with the healthcare professionals involved. I am happy to discuss the evidence by email wendy@breastfeeding-and-medication.co.uk*

- Brixen-Rasmussen L, Halgrener J, Jorgensen A, Amitriptyline and nortriptyline excretion in human breastmilk, *Psychopharmacology*, 1982;76:945.
- Misri S, Sivertz K, Tricyclic drugs in pregnancy and lactation: a preliminary report, *Int J Psychiatry Med*, 1991;21:157–71.

Gabapentin

Gabapentin is used to treat neuropathic pain as well as for its anti-epileptic activity. There is moderate-quality evidence that oral gabapentin at doses of 1200 mg daily or more has an important effect on pain in some people with moderate or severe neuropathic pain after shingles or due to diabetes (Wiffen et al. 2017).

Limited information indicates that maternal doses of gabapentin up to 2.1 g daily produce relatively low levels in infant serum (Goa and Sorkin 1993). No adverse effects on the children have been noted in several studies and infant plasma levels have been low to undetectable (Ramsay 1994; Dichter and Brodie 1996). Minimal plasma protein binding is apparent with gabapentin. Öhman et al. (2005) studied six women taking 0.9–3.2 g gabapentin and their babies. The infant dose of gabapentin was estimated to be 0.2–1.3 mg per kilogramme per day. No adverse effects were observed. The plasma concentrations in the breastfed infants were approximately 12% of the mother's plasma levels. Kristensen et al. (2006) studied one mother and baby pair and determined a m/p ratio of 0.86 and a relative infant dose of 2.34%. No adverse effects were noted in the baby. The baby should be monitored for drowsiness and adequate weight gain, particularly if the mother is receiving a multiple drug therapy regime. Relative infant dose quoted as 6.6% (Hale 2017 online access). The BNF relative safety in breastfeeding as above. Present in milk so the manufacturer advises use only if potential benefit outweighs risk (BNFC).

Probably compatible with use during breastfeeding. Observe for sedation, poor feeding.

References

- Dichter MA, Brodie MJ, New antiepileptic drugs, *N Engl J Med*, 1996;334(24):1583–90.
- Goa KL, Sorkin EM, Gabapentin. A review of its pharmacological properties and clinical potential in epilepsy, *Drugs*, 1993;46(3):409–27.
- Kristensen JH, Ilett KF, Hackett LP, Kohan R, Gabapentin and breastfeeding: a case report, *J Hum Lact*, 2006;22:426–8.
- Öhman I, Vitols S, Tomson T, Pharmacokinetics of gabapentin during delivery, in the neonatal period, and lactation: does a fetal accumulation occur during pregnancy? *Epilepsia*, 2005;46:1621–4.
- Ramsay RE, Clinical efficacy and safety of gabapentin, *Neurology*, 1994;44(6 Suppl. 5): S23–S30.
- Wiffen PJ, Derry S, Bell RF, Rice ASC, Tölle TR, Phillips T, Moore RA, Gabapentin for chronic neuropathic pain in adults, *Cochrane Database Syst Rev*, 2017Jun 9;6:CD007938.

©Dr Wendy Jones Pharmacist Breastfeeding and Medication

www.breastfeeding-and-medication.co.uk

September 2018 *The information on this sheet is based upon my professional experience as a pharmacist with a specialised interest in the safety of drugs in breastmilk, supported by evidence from expert sources. However, I cannot take responsibility for the prescription of medication which remains with the healthcare professionals involved. I am happy to discuss the evidence by email wendy@breastfeeding-and-medication.co.uk*

Pregabalin

There are no published research studies on the effect of pregabalin on the breastfed baby. It is prescribed in epilepsy, for neuropathic pain and for generalised anxiety disorder. Anecdotally I am aware that it is being used. One mother told me it made her baby drowsy and she discontinued the drug. This cannot be taken as clinical evidence.

In a study of 10 healthy women (median 35 weeks postpartum) given pregabalin 150 mg twice daily for 4 doses Lockwood determined that the relative infant dose was 7.18% and the absolute infant dose 0.31 mg/kg/day. The infants in this study were not breastfed.

The breastfed infant of a woman who was taking pregabalin as an anticonvulsant during pregnancy had a pregabalin serum concentration of 429 mcg/L at 48 hours postpartum, (8% RID). Some of the infant's serum concentration could have been derived from transplacental passage.

The half life of pregabalin is 6 hours and it is not bound to plasma proteins. It is orally highly bioavailable (Hale online access). Lactmed comments that "Very limited data indicate that amounts of pregabalin in breastmilk are low. If pregabalin is required by the mother of an older infant, it is not a reason to discontinue breastfeeding". The BNF makes no recommendation on its use in lactation.

If a mother is taking it during breastfeeding she should observe the baby for drowsiness, and effective feeding. She should take care with co-sleeping as it may cause her symptoms of drowsiness meaning she is less aware of the baby.

References

- Lockwood PA, Pauer L, Scavone JM et al. The Pharmacokinetics of pregabalin in breast milk, plasma, and urine of healthy postpartum women. J Hum Lact 2016. Lactmed on line access <https://toxnet.nlm.nih.gov>
- Hale TW Medications and Mother's Milk online access
- Ohman I, De Flon P, Tomson T. Pregabalin kinetics in the neonatal period, and during lactation. Epilepsia. 2011;52 (Suppl 6):249-50. Abstract p824.

Extracts taken from Jones W Breastfeeding and Medication 2nd Ed 2018 (Routledge)

©Dr Wendy Jones Pharmacist Breastfeeding and Medication

www.breastfeeding-and-medication.co.uk

September 2018 *The information on this sheet is based upon my professional experience as a pharmacist with a specialised interest in the safety of drugs in breastmilk, supported by evidence from expert sources. However, I cannot take responsibility for the prescription of medication which remains with the healthcare professionals involved. I am happy to discuss the evidence by email wendy@breastfeeding-and-medication.co.uk*