


Anti-psychotropic medication in pregnancy and breastfeeding

Dr Wendy Jones

Pharmacist specializing in the safety of drugs in breastmilk
Breastfeeding-and-Medication.co.uk

1



Objectives of this presentation

- > To look at the balance of risks of anti-psychotic drugs in pregnancy
- > To consider the pharmacokinetics of medication for mental health to which babies may be exposed through breastmilk
- > To evaluate whether breastfeeding can be continued following exposure to medication
- > To discuss how we may support the mother who is having mental health problems
- > And also to hear what mums want me to tell you

© Dr W Jones not to be reproduced without permission


2



Pregnancy

© Dr W Jones not to be reproduced without permission

3



Anti-psychotics and pregnancy


Antipsychotic Medication in Pregnancy & Breastfeeding

- > "Prescribing in pregnancy is a difficult decision for clinicians and patients. The potential impact on the pregnancy, foetus and the new-born child, as well as on child development, all need to be considered carefully along with treatment of conditions that affect a pregnant woman. It is known that women with severe mental illness have a higher risk of complications in pregnancy compared to women without mental illness.
- > Not treating severe mental illness also carries significant risk for the woman and foetus.

Nigel Barnes, Chief Pharmacist, Birmingham and Solihull Mental Health Foundation Trust:
www.rcpsych.ac.uk/mental-health/treatments-and-wellbeing/antipsychotics-in-pregnancy

© Dr W Jones not to be reproduced without permission

4



Pregnancy planning anti-psychotics


- > Most pregnancies aren't planned!
- > 1 in 5 pregnancies end in miscarriage and studies suggest that anti-psychotics do not increase risk
- > 3 in every 100 babies are born with a birth defect even without any medication taken by the mother
- > Huybrechts showed a small increased risk of defects with risperidone but no biological mechanism was found to explain this (further studies needed)
- > Relative Risk of birth defects is 1.05 for atypical APs and 0.90 for typical APs.
- > Antipsychotics double the risk of gestational diabetes but also seems that risk is increased in absence of medication
- > Babies may be slightly lighter or slightly heavier at birth (!)

1. Madhizen-Williamsink, Barbara CG, Carwell R, Carter A, Gilvary E, Givony V, et al. British Association for Psychopharmacology consensus guidance on the use of psychotropic medication preconception, in pregnancy and postpartum. J Psychopharmacol. 2017;31:519-552.

2. Huybrechts KF, Hernandez-Olaj S, Palomo E, Desai RJ, Mogun H, Dejene SZ et al. Anti-psychotic Use in Pregnancy and the Risk for Congenital Malformations. JAMA Psychiatry. 2016; 73:335-44.


© Dr W Jones not to be reproduced without permission

5




BUMPS – UKMI

www.medicinesinpregnancy.org/Medicine--pregnancy/



© Dr W Jones not to be reproduced without permission

6



Anti depressants in pregnancy


- > Often mums are being managed in primary care with no specialist knowledge
- > Women told to stop their medication as soon as pregnant?
- > They become scared they have taken them to that point
- > Then their mental health declines further
- > Talking therapies in advance?

What the NHS says : www.nhs.uk/conditions/antidepressants/considerations/


- > As a precaution, anti depressants are not usually recommended for most pregnant women, especially during the early stages of a pregnancy.
- > This is because they might be dangerous for your baby.
- > But exceptions can be made if the risks posed by depression (or other mental health conditions) outweigh any potential risks of treatment.
- > If you're pregnant and depressed, you should discuss the pros and cons of antidepressants with the doctor in charge of your care.

© Dr W Jones not to be reproduced without permission

7



Motherisk Canada



© Dr W Jones not to be reproduced without permission

8

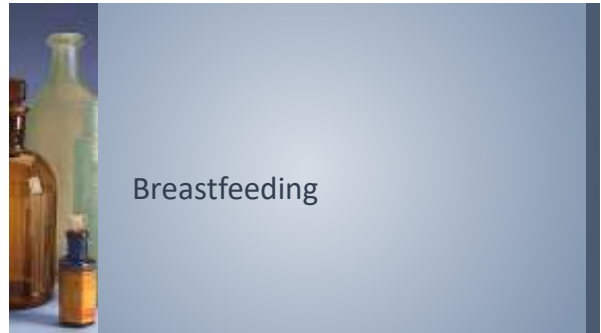
Fears of teratogenicity often prompt pregnant women to abruptly discontinue highly needed antidepressant treatment, leading to withdrawal symptoms or a relapse of the primary psychiatric illness. These women manifest higher rates of morbidity and hospitalization, including suicide attempts and impaired adherence to the steps required to maintain a healthy pregnancy. Postpartum depression can cause severe morbidity in both mother and child, and it is strongly predisposed to untreated depression in late pregnancy. **Suicide is a leading cause of death among young women with mental illnesses.**

The main reason for pregnant women with depression to consider avoiding treatment is the perception that use of SSRIs or SNRIs confers significant teratogenic effects. **However, no clear teratogenic pattern has emerged in the many studies addressing this question.** Moreover, there are many more trials with negative findings than positive ones. Recent evidence has shown that the proportion of fetal cardiac malformations is equally high in the offspring of women with treated and untreated depression, probably due to ascertainment bias. Clinicians who provide care for pregnant women with depression have to weigh the rare adverse maternal and fetal effects of antidepressant medications against the effects of not treating women who need these medications for a potentially life-threatening condition

[www.jogc.com/article/S1701-2163\(15\)30364-9/pdf](http://www.jogc.com/article/S1701-2163(15)30364-9/pdf)

© Dr W Jones not to be reproduced without permission

9



10

Understanding of pharmacokinetics

- › How do we evaluate the risk of the drug passing through breastmilk?
- › How do we manage breastfeeding?
- › How do we support the mother
- › Drug passing to baby vs risk of not taking medication?
- › Drug passing to baby vs risk of not breastfeeding?

© Dr W Jones not to be reproduced without permission

11

How do drugs get into breastmilk

Simple diffusion - 99% drugs

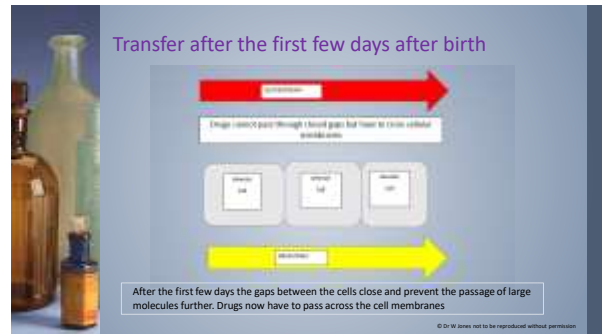


© Dr W Jones not to be reproduced without permission

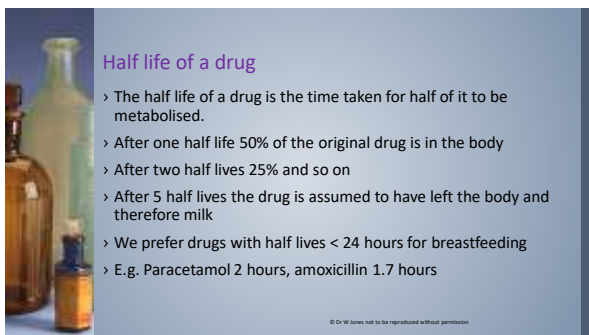
12



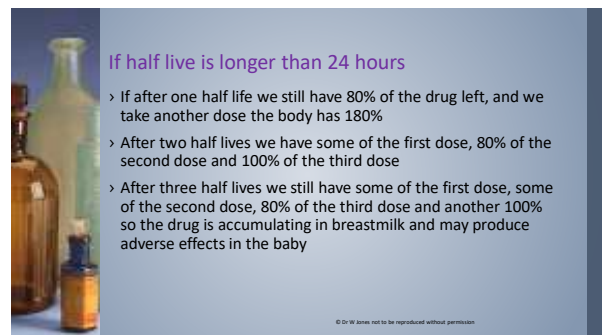
13



14



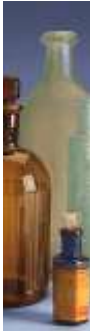

15



16

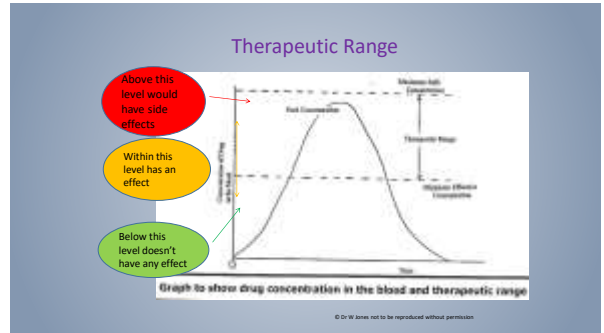
Oral bioavailability

- > Large molecules cannot pass through cell membranes
- > Usually drugs given ONLY by injection
- > If a drug can't get be absorbed from the gut however much is in milk, baby can't absorb it – gentamycin, teicoplanin, meropenem

© Dr W Jones not to be reproduced without permission

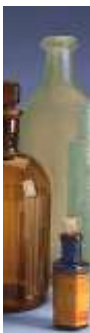

17



18

Plasma Protein Binding

- > Drugs which are highly bound to proteins in the maternal plasma are unable to transfer into breastmilk in high levels
- > Ideal drug is highly protein bound >90%

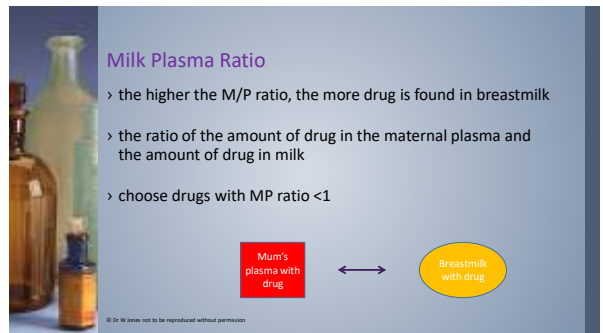



© Dr W Jones not to be reproduced without permission

19


Milk Plasma Ratio

- > the higher the M/P ratio, the more drug is found in breastmilk
- > the ratio of the amount of drug in the maternal plasma and the amount of drug in milk
- > choose drugs with MP ratio <1



© Dr W Jones not to be reproduced without permission

20



Relative infant dose

- › Designed as a simple calculation which we can use to determine safety
- › Not available in normal texts such as BNF
- › We want a relative infant dose 10% which was determined by experts to be a safe level

© Dr W Jones not to be reproduced without permission

21



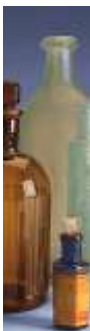
Reference sources

- › Hale Medications and Mothers Milk – a book and online access www.halesmeds.com/ from which data was taken
- › LactMed <https://toxnet.nlm.nih.gov/newtoxnet/lactmed.htm>
- › Jones Breastfeeding and Medication
- › Brown and Jones A guide to breastfeeding for the medical professional (Dec 2019)



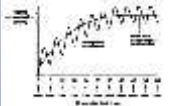
© Dr W Jones not to be reproduced without permission

22




Timing of drugs and feeds

- › Time to maximum level often quoted
- › Mums try desperately to time feeds with drug levels
- › Once any drug taken for 3 days (or 5 half lives) reaches steady state so timing irrelevant



© Dr W Jones not to be reproduced without permission

23

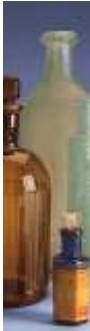


Anti-psychotics in breastfeeding

› Quetiapine	› Olanzapine
› MP ratio 0.29	› MP ratio 0.38
› Half Life 6 h	› Half Life 21-54 h
› PPB 83%	› PPB 93%
› RID 0.02% - 0.1%	› RID 0.28% - 2.24%
› Maternal quetiapine doses of up to 400 mg daily produce low levels in milk.	› Maternal doses of olanzapine up to 20 mg daily produce low levels in milk and undetectable levels in the serum of breastfed infants.

© Dr W Jones not to be reproduced without permission

24




The not so good options in breastfeeding

- > Lithium
- > MP ratio 0.24-0.66
- > Half Life 18-36 h
- > PPB 0
- > RID 0.87% - 7.29%
- > Lithium may be used in mothers of fullterm infants who are willing and able to monitor their infants.
- > Aripiprazole
- > MP ratio 0.2
- > Half Life 75 h
- > PPB 99%
- > RID 0.7% - 6.44%
- > Aripiprazole can lower serum prolactin in a dose-related manner.

© Dr W Jones not to be reproduced without permission

25

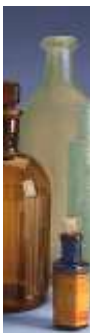


Antidepressants in breastfeeding

<p>Sertraline</p> <ul style="list-style-type: none"> > MP ratio 0.89 > Half Life 26 h > PPB 98% > RID 0.4% - 2.2% > Because of the low levels of sertraline in breastmilk, amounts ingested by the infant are small and is usually not detected in the serum of the infant 	<p>Citalopram</p> <ul style="list-style-type: none"> > MP ratio 1.16-3 > Half Life 36 h > PPB 80% > RID 3.56% - 5.37% > Infants receive citalopram in breastmilk and it is detectable in low levels in the serum of some.
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

© Dr W Jones not to be reproduced without permission

26



Antidepressants not first choice

<p>Paroxetine</p> <ul style="list-style-type: none"> > MP ratio 0.056-1.3 > Half Life 21 h > PPB 95% > RID 1.2% - 2.8% > Because of the low levels of paroxetine in breastmilk, amounts ingested by the infant are small and paroxetine has not been detected in the serum of most infants tested 	<p>Fluoxetine</p> <ul style="list-style-type: none"> > MP ratio 0.286-0.67 Half Life 2-3 days > PPB 94.5% > RID 1.6% - 14.6% > Adverse effects such as colic, fussiness, and drowsiness have been reported in some breastfed infants. Decreased infant weight gain was found in one study, but not in others. No adverse effects on development have been found in a few infants followed for up to a year.
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

© Dr W Jones not to be reproduced without permission

27

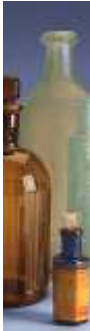


Pumping and dumping

- > Maintain supply
- > Does mum have a breast pump?
- > Does she have clear instructions on how often to pump?
- > To dump your milk is not as simple as it sounds?
- > It takes determination
- > What if baby is being cared for but mum wants to provide breastmilk or breastfeed when in contact with the baby
- > Does carer know what to look out for?

© Dr W Jones not to be reproduced without permission

28




Breastfeeding causes depression?

- > It is the pressure of being told breast is best that causes women to struggle with mental health we are told
- > The mothers told me that it was pressure to stop that made them feel worse
- > They said they wanted to be listened to and to be signposted to breastfeeding support
- > Does it matter how we felt our own children? Do we debrief our own experiences?
- > Breastfeeding is a health promotion issue just like any other

© Dr W Jones not to be reproduced without permission

29



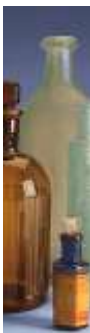
Intention to Breastfeed and Depression

- > Lowest risk of postpartum depression was found among women who had planned to breastfeed, and who had actually breastfed their babies
- > Highest risk was found among women who had planned to breastfeed and had not gone on to breastfeed for whatever reason (? Lack of support)

New Evidence on Breastfeeding and Postpartum Depression: The Importance of Understanding Women's Intentions Borra 2017

© Dr W Jones not to be reproduced without permission

30




Pain of breastfeeding and depression

- > Breastfeeding experience rather than breastfeeding duration is predictive of depressive symptoms in the postpartum period.
 - breastfeeding should be straightforward so they had failed when it wasn't
 - mothers who stop breastfeeding due to pain or physical difficulties are at greater risk of depressive symptoms

Understanding the relationship between breastfeeding and postnatal depression: the role of pain and physical difficulties Brown A 2015

© Dr W Jones not to be reproduced without permission

31



Ante natal & Perinatal Mental health

- > Pre-partum anxiety and depression, can lead to postpartum symptoms, and have an effect on breastfeeding cessation
- > Inverse association between breastfeeding frequency and maternal anxiety level – the value of oxytocin during breastfeeds?
- > Breastfeeding cessation is also a cause of intensification of anxiety and depression – at whatever stage of lactation
- > Loss of oxytocin causes positivity of being a mum to be lost – breastfeeding is about more than milk transfer

The Relation of Pre and Postnatal Depression and Anxiety with Exclusive Breastfeeding Shariff 2016

© Dr W Jones not to be reproduced without permission

32




Breastfeeding means everything to some mums

I cant understand why I feel so desperately sad. It's a deep grief, like I want to die if I cant breastfeed any longer but my doctor doesn't understand

© Dr W Jones not to be reproduced without permission

33



But not everyone cares so much about breastfeeding & that's OK

- › I've been prescribed but haven't started the course of 50mg sertraline for 28days. I'm concerned about the affects of the drug passing to my 7month old through breastfeeding. I have read through the fact sheet and am still in two minds about continuing to breastfeed or switch to formula
- › I know that virtually none passes over, but my concern is the long term affect if any it could cause her

© Dr W Jones not to be reproduced without permission

34




When mental health can cause conflicts with breastfeeding ?

- › Being told to take time for themselves and prioritise mental health over breastfeeding
- › Told to stop breastfeeding to take medication
- › Judgemental attitudes to breastfeeding
- › Concepts that mothers are being 'drained'
- › Ignoring core beliefs about breastfeeding

© Dr W Jones not to be reproduced without permission

35



Guidelines supportive of breastfeeding?

- › lack of sleep is a common precipitating factor. Mixed feeding should be supported if this is the best way to protect the mother's wellbeing – *who says so?*
- › use of a pacifier for non-nutritive sucking benefits may be advocated following consent from the mother/parent. This may help with comforting the baby and has been linked to helping reduce the risk of cot death. *Newborn babies breastfeed regularly, use of a pacifier limits time spent in suckling and therefore stimulation of milk supply. Just mentioning cot death to an anxious mum is terrifying!*

www.londononatalnetwork.org.uk/wp-content/uploads/2016/10/FinalNeodoc-v4.pdf

© Dr W Jones not to be reproduced without permission

36




Breastfeeding and Medication

- > Advice on breastfeeding can be complex - needs to take into account factors that include the effects of the medication on milk production and breastfeeding. **Evidence based information not just the BNF**
- > **The mother may have both an intellectual and emotional response to whether she can or cannot breastfeed or whether she is able to successfully breastfeed if she sets out to do so.**
- > Breastfeeding may have an effect on sleep and daily routine that may be detrimental for a mother - having a baby disrupts sleep and who needs a routine routine? Why do we need a routine – a hangover from scheduled feeds? Evidence based sleep sources would be better signpost www.basionline.org.uk/

www.londonneonatalnetwork.org.uk/wp-content/uploads/2016/10/FinalNeodoc-v4.pdf

© Dr W Jones not to be reproduced without permission

37



Useful comments by a doctor?


My doctor said there's a risk of neurological damage to my son due to the accumulation of citalopram; he backtracked a bit and said it was a small risk and the benefits outweighed the risk, but it's a risk nonetheless.

Is this something you can advise me on please? My anxiety centres around my children's health and I'm worried sick about damaging my son's development if I take citalopram.

Mum is likely to only remember the first part of this discussion with her doctor

© Dr W Jones not to be reproduced without permission

38



One mum's day in crisis

- > I've been in a room at the surgery since 8am the emergency mental health team sent me to my GP but my GP doesn't know what to give me so that I can continue breastfeeding
(It was then 1pm and she hadn't been offered any food and she was alone)
- > They prescribed the drugs and sent her home to be reviewed in the surgery the following morning
- > Was that good enough?

© Dr W Jones not to be reproduced without permission

39

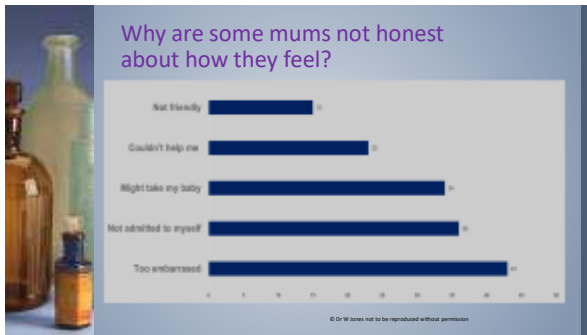


Barrier to accessing support

- > Scared to say there is a problem 'They'll take my children'
- > Fear of being criticised for not coping
- > Not recognising / denying their symptoms
- > Not being ready to access support
- > Not having time to think about themselves
- > Not knowing services available

© Dr W Jones not to be reproduced without permission

40



41

What did mothers want me to say in this presentation?

- > To be aware, considerate and supportive. First visit to the doctor he told me it was normal as I had 2 under 3, and didn't feel like that every day so nothing to worry about. I left feeling terrible, and even worse 😞
- > Just don't tell a woman who is exhausted, despairing, in pain that "just giving a bottle" will make it better. It doesn't. At all.
- > Never sign post a mother who says she thinks she may have post natal depression to contact her Health Visitor herself. It may have taken a lot of courage to voice her fears and she may not be able to tell someone else or leave a voicemail. Ask her if she would be happy for you to make a referral
- > Formula is not a white knight on a fiery steed that can charge in and fix any and all challenges parents face in the early days

© Dr W Jones not to be reproduced without permission

42

Most importantly they wanted to say ..

- > LISTEN to us and don't just tell us what to do
- > If we are struggling to breastfeed as well, signpost us to good breastfeeding support
- > Don't assume we want to stop breastfeeding
- > Stopping breastfeeding can make mental health worse too – hormones, loss of relationship with baby, loss of easy way to get baby to sleep, loss of oxytocin – regardless of age of baby!
- > JUST LISTEN AND RESPECT US

© Dr W Jones not to be reproduced without permission

43

Let's change the conversation

- > Provide mothers (and their partners) with evidence based information
- > Let's use shared decision making and trust
- > Let's promote and support breastfeeding wherever possible?
- > Let's support mum so that she can continue to breastfeed as normal even if that means a hard journey

© Dr W Jones not to be reproduced without permission

44

Healthcare professionals need training on breastfeeding, the safety of drugs in breastmilk and sensitivity to the needs of mothers around infant feeding. If a mum is having mental health issues she needs to be listened to and supported rather than told what she needs to do for her baby



Wendy@breastfeeding-and-medication.co.uk

© Dr W Jones not to be reproduced without permission

45