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PSYCHOTROPIC MEDICATIONS SAFE DURING BREAST FEEDING?: AN OBSERVATIONAL STUDY

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ABSTRACT

Given the many benefits of breastfeeding, some women taking psychiatric medications may wish to nurse their infants. When making this decision, several variables must be considered. These include the known and unknown risks of medication exposure for the baby via breast milk, the effects of untreated illness in the mother, and the benefits of and maternal preferences for breastfeeding. There are established health benefits of breastfeeding for babies and mothers. Efforts have been made to quantify the amount of psychotropic medications and their metabolites in the breast milk of nursing mothers. In order to more accurately measure the infant's exposure to medication, serum drug levels in the infant have also been assessed. From the available data, it appears that all medications, including antidepressants, antipsychotic agents, mood stabilizers, and benzodiazepines, are secreted into the breast milk to the mother. Further investigation is required on a larger and more elaborated level. In our study we found that none of the subject experienced any outburst of psychiatric symptoms. And none of the child showed any sign of sign effect of medication given to the mother. However, concentrations of these agents in breast milk vary considerably. The amount of medication to which an infant is exposed depends on several factors: factors pertaining to the specific medication, the maternal dosage of medication, the frequency of dosing and infant feedings, and the rate of maternal drug metabolism. The decision to breastfeed while taking medications is more complicated when a baby is premature or has medical complications. The nursing infant's chances of experiencing toxicity are dependent not only on the amount of medication ingested but also on how well any ingested medication is metabolized.

KEYWORDS: Psychotropic Medications, Breast Feeding, Antidepresent, Atypical Antipsychotic, Benzodiazepam, Mood Stabiliser

INTRODUCTION

World health experts encourage women to breastfeed, but many primary care physicians, obstetricians and psychiatrists are hesitant to encourage new mothers who are taking psychiatric medicines to do so.[1] There is a high rate of psychiatric illness after childbirth, which may be attributable to hormonal factors, but also can be associated with psychological stress and previous psychiatric illness in the mother.[2] The three psychiatric disorders most common after the birth of a baby are postpartum blues, postpartum depression, and postpartum psychosis.[3]

Psychiatric illness has been known to negatively influence mother-child interactions.[1] Maternal depression is associated with increase in premature births, low birth weight infants, fetal growth restriction, and postnatal complications.[4] Infants of mothers with untreated depression have been shown to cry more and are more difficult to console.[5] There is evidence that having a maternal psychiatric disorder also increases the risk of childhood behavioral problems.[6] The above mentioned statements highlight the need for treating postpartum psychiatric illnesses aggressively for the benefit of both the mother and child.

Psychotherapy should always be considered as part of the treatment choices. However, there are often instances when medications are helpful and in many cases necessary.[1] Most psychiatric drugs pass into breast milk due to their lipid solubility.[1] The most reliable method for measuring infant drug exposure is by measuring the drug level in the infant's serum. The relative infant dose is one way of quantifying infant drug exposure.[7] Most medications are considered safe when the infant dose is <10%.[1]

However in our setting, the facilities and the finances are not always available to check the maternal or the infant drug levels. The most common practice utilized to minimize risk for infants is to stop the breastfeeding and shifting the baby to formula feeds. However, this can be

detrimental to the child's health. The American Academy of Pediatrics endorses breastmilk as the best and the only source of nutrition necessary for the infant.[8] If a mother on psychotropics is breastfeeding, the newborn should be systematically monitored for any adverse effects such as drowsiness, hypotonia, rigidity, tremors and withdrawal symptoms.[9]

GROUP	AVAILABLE DATA
SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRIs)	• Well studied; reassuring safety data; low breast milk level; few adverse events in infants. • First line: Sertraline and Paroxetine. • Fluoxetine and Citalopram may have high infant levels.
TRICYCLIC ANTIDEPRESSANTS (TCAs)	• Low infant levels; mostly no adverse events. • Doxepin: Can accumulate; avoid use. • Nortriptyline: Low infantlevels and no adverse events.
NEWER ANTIDEPRESSANTS	• Venalafaxine; Mirtazapine: Low breast milk level & low infant level and no adverse events. • Bupropion: Possible seizure in infant. • Vilazodone: limited data available
BENZODIAZEPINES	• Ones with shorter half lives (Lorazepam, Alprazolam, Oxazepam) have low breast milk levels and low adverse events. • Diazepam: Report of lethargy in infant.

GROUP	AVAILABLE DATA
TYPICAL ANTIPSYCHOTICS	• Haloperidol: High breast milk level but no adverse event reported. • Chlorpromazine: Adverse event reported in one infant,no adverse events at 16 months or 5 years of age.
ATYPICAL ANTIPSYCHOTICS	• Very few case reports • Clozapine: high breast milk level due to accumulation • Risperidone, olanzapine, and quetiapine have very few case reports that indicate low breast milk levels. • Olanzapine: Few adverse events reported. • Ziprazidone and Aripiprazole: No data
MOOD STABILISERS	• Lithium: High breast milk level, high infant levels, has known adverse events, including toxicity in infant • Carbamazepine: Low infant levels, adverse events reported. • Valproic Acid: Low breast milk levels and infant levels. • Lamotrigine: High breast milk levels but no adverse events reported.

MATERIALS AND METHODS

TYPE OF STUDY: Prospective observational study carried over a period of 6 months form August 2015 to July 2016.

SAMPLE SIZE: 30.

INCLUSION CRITERIA: Women suffering from various psychiatric ailments, being treated with different psychotropic medications during lactation, who gave consent for the study.

EXCLUSION CRITERIA: Women not willing to participate in the study. TOOLS.

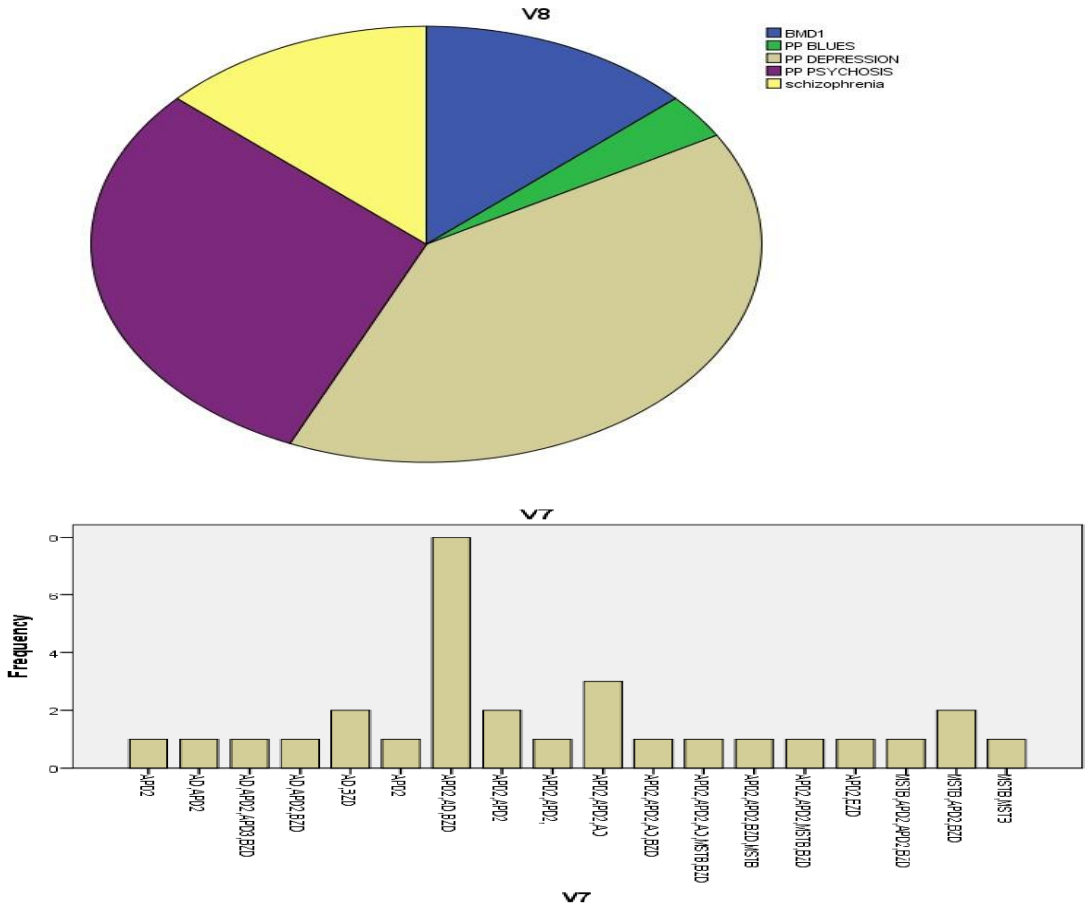
The nursing mothers were advised to watch out for any signs of adverse events like jitteriness, poor cry, abnormal movements, oversedation or convulsions. The breastfed infants were examined by a Paedatrician at monthly intervals to assess the growth & developmental milestones and any possible adverse effect. Growth and development charts were maintained.

RESULTS AND DISCUSSION

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
AGE	30	20	36	27.97	4.679
Valid N (listwise)	30				

Valid Percent	Frequency	Percent	Valid Percent	Cumulative
BMD1	4	13.3	13.3	13.3
PP BLUES	1	3.3	3.3	16.7
PP DEPRESSION	12	40.0	40.0	56.7
PP PSYCHOSIS	9	30.0	30.0	86.7
schizophrenia	4	13.3	13.3	100.0
Total	30	100.0	100.0	



- AD- ANTIDEPRESENT
- APD2- ATYPICAL ANTI
- PSYCHOTIC
- BZD- BENZODIAZEPAM
- MSTB- MOOD STABILISER

Infants also showed motor, sensory and social milestones appropriate for their age. Mothers were interviewed for any change in behaviour, drowsiness, hypotonia, rigidity, tremors or withdrawal symptoms. None of the participating mother reported any associated signs which lead back to implicate psychotropic In the study conducted, we did not find any adverse effects in the breastfed infant of mothers who are on psychotropic medication. The infants showed proper weight gain and physical development medications.

We write in response to the tragic case of Felicia Boots, who killed both her children after stopping her treatment for postnatal depression because she feared it would harm her baby.[10] There is a dearth of information to guide the use of psychotropic medication in pregnant and breastfeeding women.[11] There is a high risk of relapse of psychiatric illness during and after pregnancy, and there is much evidence that untreated maternal illness may be harmful to both mother and baby.[1] Psychotherapy should always be considered as part of the treatment choices.[1]

Due to the large variety of ailments which require even broader list of medications. Its better to discuss them in a simpler fashion.

ANTIDEPRESSANTS

- The AAP Committee on Drug Safety rates all antidepressants as effects "unknown" and may be "of concern" in breastfeeding.[12]
- However, a pooled analysis of antidepressant levels in lactating mothers suggests that it is probably safe to use antidepressants during lactation.[13]

BENZODIAZEPINES

- The AAP Committee on Drug Safety considers effects of benzodiazepines as "unknown, but may be of concern" in breastfeeding.
- Generally, the evidence shows that benzodiazepines have lower infant milk/plasma ratios than other psychotropic medications.
- Benzodiazepines with shorter half-lives have been found to be very low in breast milk.
- No adverse effects were found in most exposed infants.[4,14]

MOOD STABILIZERS

- Carbamazepine and valproic acid are more compatible with breast feeding than lithium. Lamotrigine is not recommended while breastfeeding.[14]
- The physician, however, always needs to give careful consideration to the need of keeping the mother on the medication that has kept her stable in the past (or during the pregnancy), rather than to risk relapse.

ANTIPSYCHOTICS

- With limited data, if women breastfeed while taking antipsychotics,infants should be monitored closely for possible adverse effects.
- It is recommended that clozapine should not be used, as there is a theoretical risk of agranulocytosis in the infant.[14]

CONCLUSION

Women with postpartum psychiatric disorders often face the dilemma of whether or not to use psychotropic medication. In such cases, it is important to safeguard the mental health of the mother while at the same time optimizing the emotional and physical well-being of the infant. All psychotropic agents enter breast milk. While these medications pass into infant circulation to varying degrees, a clear relationship between concentration of these medications on infant physiology, behavior, and development is unknown.

Clinical status and behavior of these infants should be carefully observed by using standardized pediatric instruments. In this way, more definitive conclusions may be made about the clinical significance of infant serum concentrations and infant daily exposure. The decision to prescribe antipsychotics to breast-feeding women should depend on individual risk/benefit analysis.[9] Studies are needed that relate measured levels of medications and metabolites in the sera of breast-fed infants to clinical status and that carefully note infant age and maternal and infant weights at the time of blood sampling.

The current available research does not allow any absolute and clear recommendation because much of the work on psychotropic medication in breast-feeding is limited to single case reports, small series and naturalistic data collection.[9] Causes and consequences of different adverse events are not yet widely studied. Non-psychiatric professionals, especially health visitors, need to be trained to recognise adverse events. There is a need for further research and accumulation of experience.

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