



## The Use of Antidepressants and Antipsychotics in Lactation (A Review of Current Literature)

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### ABSTRACT

*Treating psychiatric disorders in the post partum period when the patient is lactating is a complex and vexing issue. Little is known about the action of various psychotropic drugs through breast milk and the effects on the infant. There are a large number of drugs in the arsenal of the psychiatrist to combat post partum psychiatric disorders and each of these have been used for some time or the other in a lactating patient with no concrete and sufficient case data. This review looks at the use of antidepressants and antipsychotic medication in lactation and aims to provide the clinician and the psychiatrist matter that shall make the decision regarding choice of a drug in a lactating patient an easy one.*

**KEYWORDS :** antidepressants, antipsychotics, lactation.

### INTRODUCTION

Treating psychiatric disorders in the post partum period differs from other contexts in a number of meaningful ways. Some of the unique aspects of treating a post partum patient are biologically based most notably to the complexities in treating a lactating woman along with a significant number of psychological aspects that are attached to this context. This review aims to touch various aspects of pharmacotherapy to the post partum period with an emphasis on the lactating mother infant dyad.

There are various aspects of pharmacotherapy that are unique to this period. First there is an added stigma of psychiatric illness after childbirth. There is also a more conflicted and resistant idea to medication in the post partum period by many feeling that it would harm the infant (1). There is a huge symbolic meaning to the use of psychotropic agents in both husband and the wife in this period. The response and cooperativeness of the family members in treating psychiatric disorders in this period is often difficult to get. There is an urgency for recovery that influences treatment decisions in this period. Childbirth is known to affect the way patients perceive, tolerate and experience side effects (2).

Depression is common in lactation as well as pregnancy. Unipolar depression that is associated with the post partum period carries a high mortality and morbidity (3). The occurrence of post partum depression across various cultures varies with the disorder occurring in 15% of women (4-5). Women with a history of major depression have 10-25% chances of experiencing an episode of post partum depression (6-7). It is important that breast feeding is maintained in the post partum period. Babies that are breastfed well fall sick very rarely (8) and it has been reported that babies that are breast fed have a greater intelligence when followed up at ages of 7-8 years (9). Postpartum psychosis on the other hand has been studied less though its presentation and meaning has marked variation transculturally (10).

### ANTIDEPRESSANTS TRICYCLIC ANTIDEPRESSANTS

There are a large number of studies that promote tricyclic antidepressants (TCAs) as safe drugs for the use in lactating mothers (11-13). There are no side effects due to tricyclics reported to cause distress in infants even at less than 10 weeks of age. There is variability in drug metabolism and deposition as seen in infants and drug effects vary from infant to infant (14). Apart from the safety there are a large number of anticholinergic side effects that are common with the use of these drugs and with the advent of the newer antidepressants these medications have fallen out of repute for use in lactating mothers.

There have been four studies till date of the use of Amitriptyline in lactating mothers (15-18) and three reports of Nortriptyline use in lactation (18-20) and two reports each for Clomipramine (21-22) and Doxepin (23-24) in the same regard and anecdotal reports for Desipramine (25-26) and Dothiepin (27-28). None of these reports document any adverse effects with Amitriptyline and Nortriptyline while in one case with Doxepin there is report of anticholinergic side effects like

constipation with excess sedation and respiratory depression in the infant (23). There is another case report of an infant that had poor sucking and swallowing, drowsiness, vomiting and hypotonia when the lactating mother was on Doxepin (29). With the availability the selective serotonin reuptake inhibitors (SSRIs) and the newer classes of antidepressants, the use of TCAs for treating depression in the lactating period is on the decline.

### SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRIs)

These drugs referred to as SSRIs though with fewer side effects than the TCAs but their own share of GI and sexual side effects. There is however no doubt that they are safer for long term use compared to tricyclic drugs.

Fluoxetine is the first SSRI to be used extensively in the management of post partum depression. The drug has maximum reports of successful use in lactation (30-40). There are two reports of side effects in infants, one of infantile colic which is probably attributed to the GI effects of the drugs in the infant (41) and the other report states marked motor automatisms and skin manifestations in a preterm infant when the lactating mother was receiving fluoxetine. The neurodevelopmental outcome of the child at 4 months was normal (42). Fluoxetine has also been associated with faulty neonatal adaptation when started in the third trimester and continued after delivery (43).

There are a large number of studies that have reported Sertraline (44-52) to be safe to be administered to the mother during lactation with minimal effects on the newborn infant. There are two anecdotal reports of neonatal side effects when the mother was administered Sertraline. The first is an infant that developed nystagmus (53) and the second is a neonate that developed jitteriness (54). In both these cases the effects were transient and went off when the drug was withdrawn from the mother.

Paroxetine too has been found effective in postpartum depression and free from adverse effects to both the mother and the infant when administered in lactating mothers (55-64). The reports of adverse effects to the neonate are few and all of them report a neonatal serotonin withdrawal syndrome when the mother was receiving paroxetine with symptoms of irritability, jitteriness, hypoglycemia and necrotising enterocolitis (65-66). There is one report of neonatal intraventricular hemorrhage noted with maternal use of paroxetine (67).

There are anecdotal case reports for the successful and non eventful use of Fluvoxamine for the management of depression in lactating mothers (68-73). Till date there has been no report of adverse effects to infants with the drug.

Citalopram has been used in lactation with reports of just minimal concentrations in breast milk and infant blood (74-78). One study has found that there is no adverse effect to the infant with Citalopram (79). At the time of writing this review there is no published data on the use of Escitalopram in lactating women and the effects on the infants.

Various studies have shown that SSRIs are relatively safe for use in women that are breast feeding. There may be small perinatal complications noted with them but major fetal distress and deaths have not yet been seen. More research in this direction with longer outcome studies is warranted (80). Some researchers feel that the decision of use of these drugs in lactation have to be decided on a case by case basis and the patient has to be actively involved in the decision (81). It has been however acknowledged that despite the reluctance of women to take medications while lactating, it is known that most antidepressants are safe in lactation and untreated depression has negative consequences on both the mother and child (82). As far as safety is concerned Sertraline, Paroxetine along with Fluoxetine are the drugs preferred for use in post partum depression among the SSRIs.

#### OTHER ANTIDEPRESSANTS

Venlafaxine a selective norepinephrine reuptake inhibitor (SNRI) has been used in lactating mothers and no adverse effects reported on breast milk and the infant (83-85). There are no reports of any adverse effects to the infants when the mother was given venlafaxine. There are no reports of the use of newer agents like Mirtazapine and Reboxetine in lactating mothers and probably there is scarcity of data to comment on their safety in this regard.

Bupropion is an antidepressant drug, better known as an agent in smoking cessation that has a dopamine reuptake property in addition to its action on serotonin. It is a 2<sup>nd</sup> line antidepressant having some reports of its use successfully in smoking cessation and treating depressive symptoms due to the same in the lactating period (86-89). There is one report of an infant getting a seizure when the mother was on Bupropion during breast feeding (90).

Heterocyclic antidepressants like Mianserin are lesser used with just one report of its use in lactating women and excretion in breast milk (91). Evidence of its safety is lacking with no commitment that can be made on the same.

#### ANTI-PSYCHOTICS THE TYPICAL ANTIPSYCHOTICS

These are older drugs and have been used for over three decades in psychiatry. They have side effects in the form of extrapyramidal reactions that have plagued helpless patients many times. However there is data to suggest that these old drugs are safe while treating post partum psychosis in a mother that is lactating (92). Haloperidol has been used safely in breast feeding mothers with no deleterious effects on the infants (93-100). There are some reports of transient adverse effects like dystonias, extrapyramidal reactions and excess sedation in the infant. These disappear once the offending drug is withdrawn. However before the advent of the second generation or atypical antipsychotics, it was these typical drugs that were the backbone of treating post partum psychosis along with electroconvulsive therapy. Haloperidol and Trifluoperazine were the most commonly used drugs in this group.

#### THE ATYPICAL ANTIPSYCHOTICS

The newer antipsychotics have eased the suffering of many a patient in psychosis. They have a lower incidence of side effects like extrapyramidal reactions but side effects like weight gain, hyperlipidemia and diabetes mellitus has come to the fore (101).

Olanzapine and Risperidone are the commonly used drugs in this group. Risperidone is to be judiciously used in a lactating mother as there is an increased chance of hyperprolactinemia and galactorrhea that has been noted in these patients as well as non lactating normal female patients that have been treated with the drug (102-107). There are two reports of Risperidone excretion into breast milk with no reports of an adverse events to the infants involved (108-109).

Olanzapine is the preferred drug though it has its own share of weight gain and the chances of causing drug induced diabetes mellitus and hyperlipidemia (110-111). This weight gain may at times add to the weight gain seen in a normal pregnancy where in a patient may actually want to have their weight reduced in the postpartum period. There are reports of the successful use of Olanzapine in lactating mothers with no adverse effects on both mothers and infants (112-115). However authors recommend that the decision to use Olanzapine in breast feeding mothers must be made on a case by case basis and after an individual risk benefit analysis (115).

The newer drugs like Ziprasidone and Quetiapine have not yet been used to a large extent in lactating and there are just sporadic reports that talk about them (116). Long term use and the effect on the neurodevelopment of infants when exposed to these drugs in lactation needs to be evaluated.

Clozapine is an atypical antipsychotic that has been used in resistant schizophrenia and has received FDA approval for the same. It has a serious side effect of causing agranulocytosis in 1% of cases and hence caution is exerted with strict monitoring of blood counts whenever the drug is used (117). There is just a solitary report of its use in a lactating patient with no untoward effect on the mother and infant though much data remains elusive (118).

Other antipsychotics like Flupenthixol and Zuclophentixol have a wider use in European nations. There is an anecdotal report on these drugs in lactation with no reports of adverse outcomes (119). There is no data on the use of long term or depot antipsychotics in lactating mothers. Data on the use of newer drugs like Aripiprazole and Sertindole in this special population is still awaited.

#### CONCLUSIONS

We have reviewed literature on various antipsychotics and antidepressants drugs used both in the management of depression and psychosis that has its onset in the lactating period. Women are plagued with psychiatric problems throughout the life cycle. The complex biology of a woman along with hormonal interplay and endocrinal malfunction make the treatment of psychiatric disorders in women a vexing problem. In all cases of lactating mothers that need the administration of psychotropic drugs it is best to weigh the pros and cons as in individual cases. The life of both the mother and child are precious but at times in our practice, sacrifices have to be made and chances have to be taken in order to benefit a patient. This review aims in helping the busy clinician and the practicing psychiatrist to enhance his decision in these cases and also to make that decision an easy one.

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