2018

Treating Peri and Postnatal Depression & Anxiety

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Abstract

❖The **objective of this research** is to evaluate the commonly prescribed treatment methods for prenatal and postnatal depression, focusing on the efficacy of antidepressant medications and nonpharmacologic treatments while evaluating the effects these medications have on the fetus/breastfeeding infant.

❖The **method of research** included 15 studies completed with within the past ten years on women who were pregnant or who had delivered a baby within the past 12 months. One study did evaluate long-term effects on offspring, which included a participant number of 3,342 children who were exposed to antidepressants during pregnancy. The total number of participants in the studies were 8,069 women.

❖ **Limitations** within the data are due to small sample sizes in several of the studies and few available studies that directly evaluate this population of women and children.

❖**Data results** suggest that while cognitive group therapy does provide depression symptom improvement in prenatal and postnatal depression and anxiety, antidepressant medications tend to have a positive effect earlier in treatment. Unfortunately, many of these antidepressant medications have also been proven to have both short and long tern effects on the offspring exposed to pharmacologic treatment.

Introduction

❖ First line treatment for severe or chronic major depression disorder in adults: a referral to behavioral health in combination with antidepressant therapy (National Guideline Clearinghouse, 2012).

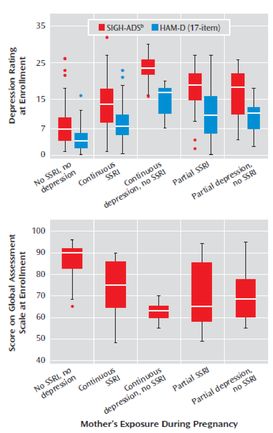
❖Medication classes include: selective serotonin reuptake inhibitor (SSRI), tricyclic antidepressants (TCA), serotonin-norepinephrine reuptake inhibitor (SNRI), norepinephrine reuptake inhibitor (NRI), and dopamine agonists (DA).

❖ Prevalence of Prenatal Depression: 6-13% (Charlton et al., 2014).

❖ Prevalence of Postpartum Depression: up to 20% (Van Lieshout et al., 2017).

Statement of the Problem

One difficult area in the treatment of both depression and anxiety is in the prenatal and breastfeeding patient population. Providers and patients must work together to determine the best path of action for this unique situation of caring for both the pregnant patient's mental health and her unborn child.



Baseline Depression and Global Functioning of Women With or Without Exposure to SSRI Antidepressants and Depression During Pregnancy
a Within each box, the white line represents the median value. The top and bottom edges of the box represent the 75th and 25th percentiles, respectively; these define the interquartile range. Each bar attached to the box represents 1.5 times the interquartile range; the filled circles are outliers.
b 29-item Structured Interview Guide for the Hamilton Depression Rating Scale With Atypical Depression Supplement (29).

Wisner et al. (2009), page 561.

Research Questions

❖In the pregnant and breastfeeding population, what is the efficacy of antidepressant medication treatment for patients diagnosed with depression and/or anxiety?

❖In pregnant patients diagnoses with depression and/or anxiety, what are the fetal effects resulting from use of antidepressants during pregnancy?

❖In breastfeeding patients diagnosed with depression and/or anxiety, are there effects caused from the transfer of antidepressant medications from mother to infant during lactation?

❖In patients diagnosed with depression and/or anxiety during pregnancy and postpartum, what is the effectiveness of treatment options such as cognitive behavioral health therapy?

Literature Review

❖ Depression symptoms are thought to be caused by a deficiency of synaptic neurotransmitters such as serotonin, norepinephrine, and dopamine (Bardal et al., 2011).

❖ Goals of antidepressant medication: improve the patient's mood by altering the neurotransmitter receptors and transporters to increase the availability of the neurotransmitters within the synaptic cleft.

❖ **Antidepressant Medication Efficacy**

❖ Sharp et al. (2010) found that 45% of women receiving SSRI treatment responded in 4 weeks compared to therapy sessions in which only 20% improved after 4 weeks. At 18 weeks of treatment, both medication and therapy responses were similar.

❖ **Antidepressant Medication Effects on the Fetus**

❖ Klieger-Grossman et al. (2012) found that infants exposed to escitalopram (SSRI) had an increased risk of low birth weight (9.9%) compared to other antidepressants (3.6%). Spontaneous abortions were almost two times as common in antidepressant medications (16%) when compared to controls (8.5%).

❖ Rai et al. (2017) found that 4.1% of children exposed to antidepressants were diagnosed with autism, compared to 2.9% of children not exposed to medications.

❖ **Antidepressant Medication Effects on the Breastfeeding Infant**

❖ Weissman et al. (2004) found that fluoxetine had the highest serum levels in breastfeeding infants (22%) compared to paroxetine, nortriptyline, and sertraline.

❖ **Non-pharmacotherapy treatment effectiveness**

❖ Van Lieshout et al. (2017) found that group cognitive behavioral therapy (CBT) showed statistical improvement of depressive symptoms in 80% of women receiving treatment over 9 weeks.

❖ A Cochrane Review found shat interpersonal psychotherapy had increased improvement rates when compared to parenting education programs (Dennis et al., 2007).

Discussion

The literature review collectively found that both antidepressant treatment and non-pharmacotherapy such as CBT are beneficial in women suffering from depression and anxiety in the perinatal or postpartum time. However, pharmacotherapy methods tend to have a positive effect in a shorter amount of time when compared to psychosocial therapies. Unfortunately, these antidepressant medications have been shown to have a potentially negative impact on the fetus during pregnancy. For the breastfeeding infant, fluoxetine has been shown to be present in the serum of exposed infants.

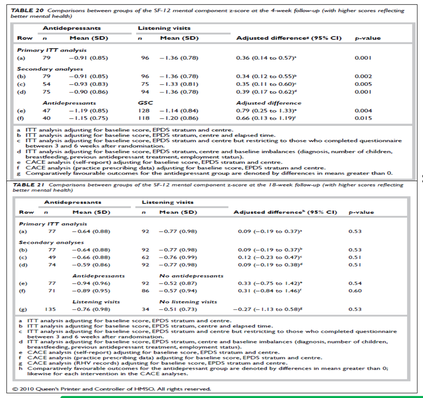


TABLE 20 Comparisons between groups of the SF-12 mental component z-score at the 4-week follow-up (with higher scores reflecting better mental health)

Row	Antidepressants n	Antidepressants Mean (SD)	Listening visits n	Listening visits Mean (SD)	Adjusted difference[a] (95% CI)	p-value
Primary ITT analysis						
(a)	79	−0.91 (0.85)	96	−1.36 (0.78)	0.36 (0.14 to 0.57)[e]	0.001
Secondary analyses						
(b)	79	−0.91 (0.85)	96	−1.36 (0.78)	0.34 (0.12 to 0.55)[e]	0.002
(c)	54	−0.93 (0.83)	75	−1.33 (0.81)	0.35 (0.11 to 0.60)[e]	0.005
(d)	75	−0.90 (0.86)	94	−1.36 (0.78)	0.39 (0.17 to 0.62)[e]	0.001
	Antidepressants		*GSC*		*Adjusted difference*	
(e)	47	−1.19 (0.85)	128	−1.14 (0.84)	0.79 (0.25 to 1.33)[e]	0.004
(f)	40	−1.15 (0.75)	118	−1.20 (0.86)	0.66 (0.13 to 1.19)[e]	0.015

a ITT analysis adjusting for baseline score, EPDS stratum and centre.
b ITT analysis adjusting for baseline score, EPDS stratum, centre and elapsed time.
c ITT analysis adjusting for baseline score, EPDS stratum and centre but restricting to those who completed questionnaire between 3 and 6 weeks after randomisation.
d ITT analysis adjusting for baseline score, EPDS stratum, centre and baseline imbalances (diagnosis, number of children, breastfeeding, previous antidepressant treatment, employment status).
e CACE analysis (self-report) adjusting for baseline score, EPDS stratum and centre.
f CACE analysis (RHV records) adjusting for baseline score, EPDS stratum and centre.
g Comparatively favourable outcomes for the antidepressant group are denoted by differences in means greater than 0.

Sharp et al. (2010), page 45

TABLE 21 Comparisons between groups of the SF-12 mental component z-score at the 18-week follow-up (with higher scores reflecting better mental health)

Row	Antidepressants n	Antidepressants Mean (SD)	Listening visits n	Listening visits Mean (SD)	Adjusted difference[a] (95% CI)	p-value
Primary ITT analysis						
(a)	77	−0.64 (0.88)	92	−0.77 (0.98)	0.09 (−0.19 to 0.37)[e]	0.53
Secondary analyses						
(b)	77	−0.64 (0.88)	92	−0.77 (0.98)	0.09 (−0.19 to 0.37)[e]	0.53
(c)	49	−0.66 (0.88)	62	−0.76 (0.99)	0.12 (−0.23 to 0.47)[e]	0.51
(d)	74	−0.59 (0.86)	92	−0.77 (0.98)	0.09 (−0.19 to 0.38)[e]	0.51
	Antidepressants		*No antidepressants*			
(e)	77	−0.94 (0.96)	92	−0.52 (0.87)	0.33 (−0.75 to 1.42)[e]	0.54
(f)	71	−0.89 (0.95)	86	−0.57 (0.94)	0.31 (−0.84 to 1.46)[e]	0.60
	Listening visits		*No listening visits*			
(g)	135	−0.76 (0.98)	34	−0.51 (0.73)	−0.27 (−1.13 to 0.58)[e]	0.53

a ITT analysis adjusting for baseline score, EPDS stratum and centre.
b ITT analysis adjusting for baseline score, EPDS stratum, centre and elapsed time.
c ITT analysis adjusting for baseline score, EPDS stratum and centre but restricting to those who completed questionnaire between 3 and 6 weeks after randomisation.
d ITT analysis adjusting for baseline score, EPDS stratum, centre and baseline imbalances (diagnosis, number of children, breastfeeding, previous antidepressant treatment, employment status).
e CACE analysis (self-report) adjusting for baseline score, EPDS stratum and centre.
f CACE analysis (RHV records) adjusting for baseline score, EPDS stratum and centre.
g Comparatively favourable outcomes for the antidepressant group are denoted by differences in means greater than 0; likewise for each intervention in the CACE analyses.

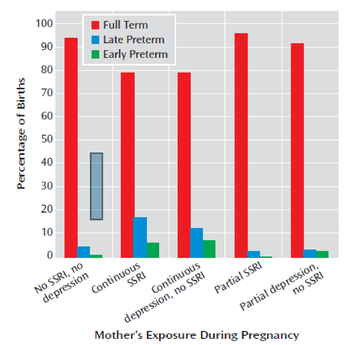
TABLE 3. Relation of Maternal Weight Gain, Prepregnancy Body Mass Index (BMI), and Infant Birth Weight to Mother's Exposure to SSRI Antidepressants and Depression During Pregnancy

Weight Variable and Maternal Group	N	Mean	SD	Linear Regression: Unadjusted[a] F	df	p	Adjusted for Maternal Age and Race[a] F	df	p
Weight gain (lb)[b]				1.61	4, 137	0.17	1.00	4, 135	0.41
No SSRI, no depression	82	31.6	13.0						
Continuous SSRI exposure	23	28.6	13.8						
Continuous depression, no SSRI	3	17.7	15.5						
Partial SSRI exposure	16	31.4	12.0						
Partial depression, no SSRI	18	24.8	16.2						
Prepregnancy BMI[c]				2.19	4, 212	0.07	1.76	4, 210	0.14
No SSRI, no depression	120	25.9	7.1						
Continuous SSRI exposure	42	27.3	5.4						
Continuous depression, no SSRI	14	30.5	7.1						
Partial SSRI exposure	19	26.0	6.6						
Partial depression, no SSRI	22	29.3	9.3						
Infant birth weight (kg)[d,e]				1.58	4, 230	0.18	1.86	4, 228	0.12
No SSRI, no depression	130	3.53	0.5						
Continuous SSRI exposure	47	3.36	0.7						
Continuous depression, no SSRI	14	3.22	0.6						
Partial SSRI exposure	22	3.39	0.4						
Partial depression, no SSRI	22	3.37	0.6						

[a] The p values are based on changes in R^2.
[b] The weight gains recommended by the Institute of Medicine (32) are as follows: for underweight women (BMI, <19.8), 28–40 lb; for normal-weight women (BMI, 19.8–26.0), 25–35 lb; for overweight women (BMI, 26.1–29.0), 15–25 lb; and for obese women (BMI, >29.0), 15 lb. No difference across exposure groups was observed for weight gains within, lower than, or higher than these ranges (adjusted χ^2=4.77, df=8, p=0.78, polychotomous logistic regression).
[c] Data were available only for the subjects in Pittsburgh. Although the overall difference in mean prepregnancy BMI was not significant, the means for the groups with depression (continuous or partial) were significantly different from the mean for the group with no SSRI or depression exposure. The distribution of women with prepregnancy BMIs in the categories defined by the Institute of Medicine as underweight, normal, overweight, and obese did not differ across exposure groups (adjusted χ^2=7.47, df=8, p=0.48, polychotomous logistic regression).
[d] Categorical analysis of infants small, normal, or large for gestational age revealed no significant differences across exposure groups (adjusted χ^2=5.56, df=8, p=0.70, polychotomous logistic regression). Designations of small and large for gestational age were based on charts for singleton births stratified by gender (http://www.phac-aspc.gc.ca/rhs-ssg/bwga-pnag/index-eng.php). Infants below the 10th percentile were considered small for gestational age, and those above the 90th percentile were considered large for gestational age.
[e] Model adjusted for maternal age, race, and infant gestational age at birth. F=1.11, df=4, 227, p=0.35.

Wisner et al. (2009), page 562

FIGURE 3. Relation of Infant's Gestational Age at Birth to Mother's Exposure to SSRI Antidepressants and Depression During Pregnancy



Wisner et al. (2009), page 563

Applicability to Clinical Practice

❖ The standard practice guidelines for treatment and management of adult depression and anxiety include both cognitive behavioral therapy (CBT) and antidepressant medications.

❖The research gathered in this literature review do suggest that antidepressant medications tend to have a quicker response rate for improvement of symptoms when compared to psychosocial therapies. CBT does show symptom improvement as well, but tends to take more sessions to reach the same improvement rate as medication therapy.

❖Unfortunately, there continues to be research showing that the commonly-used antidepressant medications have effects on offspring. During pregnancy, spontaneous abortions are more common across all antidepressant medication classes. Smaller birth weight and earlier delivery rates are associated with women who have taken antidepressant medications.

❖Although not studied thoroughly, antidepressant metabolites have been shown to appear in the serum of lactating infants exposed to antidepressants.

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Acknowledgements

I would like to express my gratitude to our professors, especially Professor Kauffman and Professor Sieg, for offering their input and guidance throughout this time of research and writing. I would also like to thank Marilyn Klug, PhD for her assistance in formatting my research questions and data collection results. Finally, I would like to thank Dr. Megan Miller-Pankratz for her valuable input regarding psychiatric management in prenatal and postpartum care.