

Antenatal Anxiety as a Predictor for Postpartum Depression

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Introduction

Postpartum depression affects 30-37% of new mothers in the United States. Psychiatric illness is a leading cause of maternal morbidity and mortality, and maternal distress in the postpartum period is associated with long-term developmental and behavioral effects in infants. Our objective was to evaluate the correlation between the Generalized Anxiety Disorder 7-Item Scale (GAD-7) taken in the 1st trimester and the Edinburgh Postnatal Depression Scale (EPDS).

Methods

- Prospective observational study
- Inclusion criteria: English or Spanish-speaking women ≥ 18 years, in their first trimester of pregnancy
- Participants completed the GAD-7 and EPDS at first trimester and 6-week postpartum.
- A EPDS score of ≥ 10 in the postpartum period was considered to be a positive screen.
- Chi-square tests, t-tests, non-parametric tests, and logistic regression were used where appropriate.

Results

- 100 women were enrolled in the study, with 94 being included in the final analysis.
- The average EPDS and GAD-7 scores in the first trimester were 4.4 ± 4.5 and 4.5 ± 4.3 .
- The average EPDS and GAD-7 scores 6 weeks postpartum were 4.2 ± 4.9 and 4.1 ± 5.2 .
- Thirteen women (13.4%) had a positive postpartum EPDS.
- The 1st trimester EPDS and GAD-7 were both significantly correlated with a positive postpartum EPDS ($p=0.006$ and < 0.001).
- An optimal cut-off of 5 was found for both tools using logistic regression and ROC curves.
- Logistic regression found that women with a GAD-7 >5 had an 18.4 (95%CI, 3.2-107.2) odds of having a positive postpartum EPDS. The 1st trimester EPDS was found to be non-significant.
- Using a GAD-7 cut-off of 5 had a NPV of 97% and a PPV of 40.4%. No other patient data was found to be significantly associated with a positive postpartum screen.

Conclusion

Peripartum mood disorders are a major cause of maternal morbidity, and our work has shown that the GAD-7 may be useful as a screening tool. Future studies will determine whether interventions designed for these women can decrease their risk of postpartum depression.

Table 1. Patient Characteristics

	N=94		N=94
Age (years)	30.9 \pm 5.2	Primigravid	24 (2.5)
GA at enrollment (wks)	11.5 \pm 1.7	Nulliparous	54 (57.4)
Race		H/o pregnancy loss	40 (42.6)
White	63 (67)	H/o preterm delivery	9 (9.6)
Black	6 (6.4)	H/o operative delivery	24 (25.5)
Asian	11 (11.7)	H/o Anxiety	31 (33)
Other	14 (14.9)	H/o Depression	26 (27.7)
Hispanic	20 (21.3)	Preexisting Psychiatric Dx	17 (18.1)
		Pregestational DM	4 (4.3)

Table 2. Delivery Characteristics

	N=94		N=94
Gestational Age at Delivery	38.6 \pm 1.7	Anesthesia Type	
IOL	36 (38.3)	Epidural	57 (60.9)
Mode of Delivery		Spinal	21 (22.3)
Vaginal	57 (60.6)	Combined	6 (6.4)
Vacuum-Assisted Vaginal Delivery	1 (1.1)	General	7 (7.4)
Cesarean	34 (36.2)	None	3 (3.2)
Cesarean unscheduled	15 (44.2)	Newborn Gender	26 (27.7)
Birth Weight	3313 \pm 580	Female	39 (41.5)
Transfused	6 (6.4)	Male	53 (56.4)
		NICU Admission	9 (9.6)

Table 3. EPDS and GAD-7 scores in the first trimester and postpartum

	1 st Trimester	Postpartum
EPDS >10	6 (6.4)	13 (13.8)
GAD7	n=91	n=41
0-4 Minimal Anxiety	57 (60.6)	28 (68.3)
5-9 Mild Anxiety	19 (20.2)	7 (17.1)
10-14 Moderate Anxiety	12 (12.8)	2 (4.9)
>15 Severe Anxiety	3 (3.2)	3 (7.3)

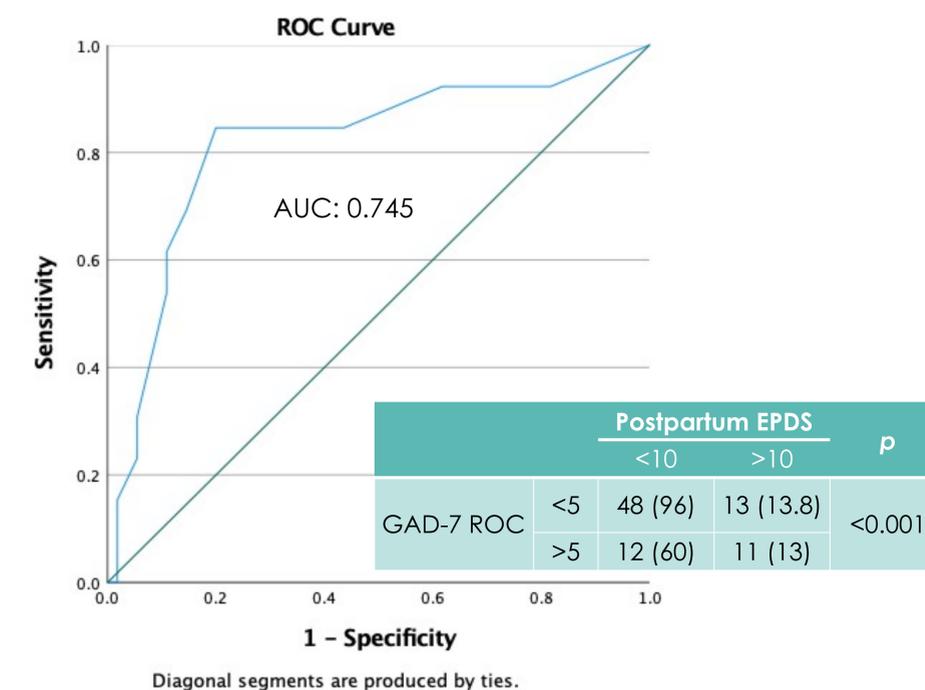


Figure 1. Optimal ROC curve cutoff of 5 for GAD-7, with sensitivity of 84.6%, specificity of 80%, negative predictive value of 97.0 and positive predictive value of 40.7.

The **GAD-7** may be a useful antenatal screening tool for postpartum depression.

