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A prospective study of antidepressant adherence and suicidal ideation among adults

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INTRODUCTION

Previous studies examining the link between antidepressant medication and suicidal ideation among youth have been inconclusive.¹⁻³ Earlier studies demonstrated an association leading to the Food and Drug Administration's black box warning,¹ but more recent studies have suggested an inverse association, such that antidepressants may reduce suicide risk. Additionally, most studies among adults suggest that antidepressants decrease suicidal ideation during the immediate period following initiation.² Nevertheless, little research has examined long-term suicidal ideation associated with continued antidepressant therapy. It is not known whether risk varies by level of adherence or by the class of antidepressant medication. The current study examined whether antidepressant adherence was associated with a heightened or lower likelihood of suicidal ideation among adults with depression.

METHODS

This study included 344 patients with a clinical diagnosis of major depression and no self-reported suicidal ideation at baseline. All patients received antidepressant treatment from clinical providers within a single, large health system and were members of the affiliated health plan. This allowed complete capture of healthcare utilization and pharmacy records. To ensure long-term medication use, patients were required to fill a prescription for a selective serotonin reuptake inhibitor (SSRI) or a serotonin-norepinephrine reuptake inhibitor (SNRI) before, during, and after the 1-year observation period. Prospective surveys querying suicidal thoughts and depressive symptoms, using the 9-item Patient Health Questionnaire (PHQ-9),⁴ were administered at baseline and after 1 year of observation. Suicidal thoughts were assessed via the 9th item of the PHQ-9, which has been shown to predict suicidal behavior.⁵ An item 9 score ≥ 1 (self-harm thoughts at least several days the prior two weeks) was used to indicate suicidal thoughts. Pharmacy claims were used to calculate a continuous measure of medication availability (CMA).⁶ CMA estimates adherence by using the total medication days' supply to determine the proportion of days that it could have been taken as directed. Logistic regression prospectively measured antidepressant adherence and suicidal ideation (yes-no) with adjustment for baseline depression severity and demographic factors. Analyses were stratified by class.

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RESULTS

Overall, 344 patients filled an antidepressant at all 3 required time points (i.e., before, during, and after the 1-year observation time). This included 243 patients who filled an SSRI and 144 who filled an SNRI during each period, with 43 individuals filling prescriptions for both medication classes. Patient demographic characteristics are shown in Table 1. Baseline depression severity scores averaged approximately 7 - indicating mild depressive symptoms. On average, patients were adherent to their antidepressant medication an estimated 85% of days. As shown in Table 1, greater adherence to antidepressants overall was associated with a lower likelihood of suicidal ideation at 1-year follow-up, even after adjustment (odds ratio [OR] = 0.61, p -value = 0.047). Adherence to SSRIs was also independently associated with a lower likelihood of suicidal ideation (OR = 0.52, p -value = 0.025), but the association did not persist for SNRIs (OR = 0.61, p -value = 0.140).

DISCUSSION

This prospective study suggests that adherence to antidepressants may prevent suicidal ideation in adults with major depression. While the magnitude and direction of association was similar for SNRIs, this subgroup analysis did not reach statistical significance, a likely result of the smaller sample size and lower power. Overall, our findings extend prior research indicating that short-term antidepressant treatment reduces suicidal ideation among adults.² The study also underscores the importance of adherence to long-term treatment for depression. However, treatment decisions should consider the observational nature of this study and the generalizability of a single health system's experience. While our findings support a beneficial role for antidepressant therapy in reducing or preventing suicidal ideation in adults, additional research is needed to replicate the results.

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Table 1

Prospective study examining variation in antidepressant adherence, stratified by class, and suicidal ideation at 1-year follow-up.

<i>Panel 1: Sample Characteristics</i>	All, Combined SSRIs and SNRIs; n=344	Selective Serotonin Reuptake Inhibitors (SSRIs); n=243	Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs); n=144
Female - n (%) [ref.=Male]	266 (77)	187 (78)	111 (77)
Black, African American - n (%) [ref.=White, Caucasian]	56 (16)	34 (14)	27 (19)
Suicidal Ideation at 1-year follow-up - n (%) [ref. = no suicidal ideation at follow-up]	19 (6) n=321	15 (7) n=229	8 (6) n=133
Age - mean \pm SD	62.34 \pm 12.74	62.05 \pm 13.47	62.19 \pm 11.60
Baseline Depression Severity - mean \pm SD	7.02 \pm 5.22	6.70 \pm 5.25	7.68 \pm 5.05
Continuous Measure of Medication Availability (CMA) - mean \pm SD	0.85 \pm 0.20	0.85 \pm 0.20	0.85 \pm 0.22

<i>Panel 2: Logistic Regression Analysis</i>	Unadjusted		Adjusted*	
	OR (95% CI)	p-value	OR (95% CI)	p-value
Selective Serotonin Reuptake Inhibitors (SSRIs); n=243	0.57 (0.34-0.96)	0.033	0.52 (0.29-0.92)	0.025
Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs); n=144	0.63 (0.34-1.18)	0.150	0.61 (0.32-1.18)	0.140
All, Combined SSRIs and SNRIs; n=344	0.63 (0.40-0.99)	0.044	0.61 (0.38-0.99)	0.047

All odds ratios are calculated for an increase of 0.25.

* Adjusted for age, sex, race/ethnicity, and baseline depression severity