

Effect of antidepressant treatment on suicidal behavior among women with postpartum depression: a target trial emulation

3. Epidemiology and surveillance

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Abstract text

Background: Postpartum depression (PPD) affects one fifth of new mothers worldwide and as illustrated in our recent work, confers 7.2-fold higher risk of suicide attempt and suicide death within the first year after diagnosis. It is however unknown whether the first-line pharmaceutical treatment (antidepressants) can mitigate such risk among women with PPD.

Methods: We conducted an emulated target trial of 26,232 women diagnosed with PPD during 2007-2022 in Sweden using national and regional healthcare registers. Initiation of antidepressants within 28 days after diagnosis was ascertained from the Prescribed Drug Register, with one-year follow-up for any suicide attempt and suicide death recorded in registers. Multivariable Cox regression was employed to estimate the efficacy of antidepressants on suicidal behavior risk. Inverse probability weighting was applied to account for baseline confounding in the intention-to-treat analysis, as well as for treatment non-adherence and time-varying confounding in the per-protocol analysis.

Results: At a mean age of 31.6 (SD 5.3) years, antidepressants was dispensed for 11,186 (42%) women with PPD. During the follow-up, 426 events (10.17 per 1000 person-years) of suicidal behavior were observed in the initiators while 422 events (7.54) in the non-initiators. In the ITT analysis, initiation of antidepressants was associated with 25% increased risk of suicidal behavior (HR 1.25, 95% CI 1.14-1.38). Future analysis will focus on different types of antidepressants, subtypes of suicidal behavior, and implement per-protocol analysis.

Conclusions: While no randomized clinical trial is available or justifiable, the present target trial provide preliminary evidence that antidepressants alone may not be effective enough to mitigate the suicidal risk among patients with PPD. While antidepressants remain widely prescribed for this group, it is important to develop patient-centered treatment plans and implementable suicidal screening and prevention strategies.