Effects of prenatal maternal depression and antidepressant exposures on offspring ENT outcomes

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Introduction

Prenatal maternal depression (PMD) impacts infant health. Antidepressants (especially SSRIs) are first-line treatments for PMD but there is research showing they have negative effects on newborn health. This study investigated the association between PMD, antidepressant use (SSRIs and SNRIs), and newborn ear, nose, and throat (ENT) conditions.

Hypothesis and Goals: Our goal is to investigate the effects of antidepressant use and/or depression in pregnant mothers for their newborn children, specifically regarding ENT outcomes. Our initial hypotheses were that both depression and antidepressants would cause negative outcomes in offspring.

Methods and Materials

- A longitudinal birth cohort study followed 456 pregnant women (312 for current analysis) and their newborns at CHU Sherbrooke in Sherbrooke, Quebec, Participants included (*Figure 1)*
  - Mothers with untreated PMD,
  - Mothers treated with antidepressants
  - Healthy controls.

  Newborn outcomes assessed included hearing tests, developmental scales, diagnoses made at otolaryngologist and audiologist appointments, and sociodemographic data.

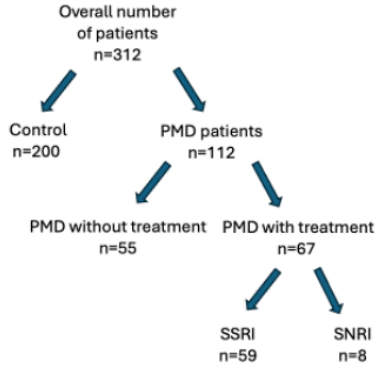

Figure 1: Demographic distribution of patients

Results

- PMD was significantly associated with increased risk of multiple otitis media (MOM) in newborns (OR: 5.99, CI: 1.12-60.07) *(Figure 3)*
- SNRI use was linked to a higher risk of overall ENT conditions (OR: 7.56, CI: 1.32-43.61) (*Figure 2)* and abnormal ear drum mobility (OR: 27.64, CI: 3.23-221.03).
- However, no significant differences in ENT outcomes were found between newborns of mothers with PMD treated with SSRIs and those with untreated PMD.

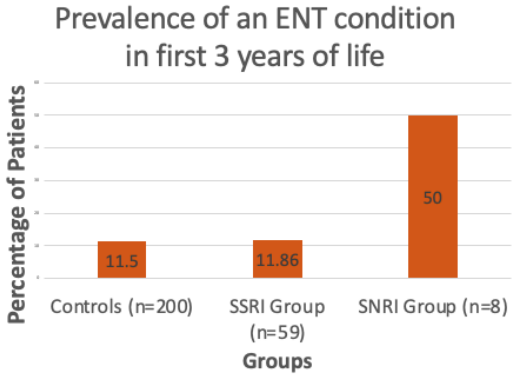

Figure 2: Prevalence of ENT conditions

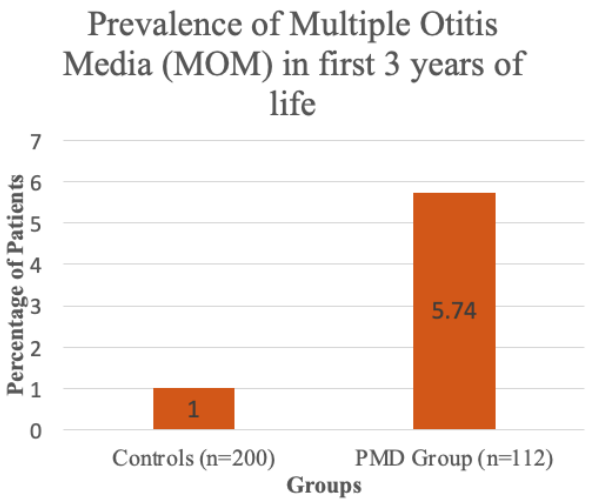

Figure 3: Prevalence of MOM

Discussion

Key findings:

- PMD linked to increased risk of multiple otitis media in newborns
- SNRI use associated with higher risk of ENT conditions and abnormal ear drum mobility
- No significant differences between SSRI-treated and untreated PMD groups

Implications:

- Highlights importance of addressing maternal depression during pregnancy
- Suggests caution with SNRI use; SSRIs may be safer but require further study
- Emphasizes need for individualized treatment and careful monitoring

Our results contribute to the debate on antidepressant use during pregnancy, underscoring the importance of balancing maternal mental health with potential risks to newborn ENT outcomes.

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