

DEVELOPMENT OF POSTPARTUM DEPRESSION FOLLOWING ASSISTED REPRODUCTIVE TECHNOLOGY: A LARGE NETWORK STUDY

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Background: There has been an increase in the utilization of assisted reproductive technology (ART) leading to increased research into pregnancy outcomes. Research on postpartum depression (PPD) following ART has been minimal. So far, research has shown mixed results; some studies have reported increased PPD in women who conceive with ART, whereas others report no difference^{1,2}. There is also limited research on the risk of PPD development in different patient populations who receive ART.

Objective: Assess differences in the risk of development of PPD in patients who conceive with ART versus naturally and evaluate differences in the risk of developing PPD stratified by racial groups.

Materials and Methods: This retrospective cohort study was conducted using the TriNetX research network of healthcare organizations. The ART group was defined by patients who had supervision of pregnancy resulting from ART (ICD-10 O09.81), and associated ICD-10 codes (O09.811-813 and O09.19). The control group consisted of patients who had a pregnancy (ICD-10 10 and Z33.1) but excluded patients with the ART ICD-10 codes. Propensity score matching was used for age, race, and ethnicity. Logistic regression analysis was used to investigate the association of each group and development of PPD following pregnancy.

Result(s): Using the TriNetX database, 68,556 patients were included in the ART group and 2,398,564 patients in the control group. When patients who conceived via ART were stratified, there were 43,550 White, 3,897 Black, 5,059 Asian, and 4,035 Hispanic patients. When comparing all patients who conceived with ART versus naturally, those who conceived with ART are at an increased risk for developing PPD (RR 1.29, 95 CI 1.20,1.39, p<0.0001). For specific racial/ethnic groups, patients who conceived with ART were significantly more likely to develop PPD in White (2.65% vs. 2.17%) (RR 1.22, 95 CI 1.12,1.33, p<0.0001), Black (2.63% vs. 1.67%) (RR 1.57, 95 CI 1.15,2.14, p=0.0038), and Hispanic (2.21% vs. 1.34%) (RR 1.65, 95 CI 1.18,2.31, p=0.0031) patients but not Asian patients (1.60% vs. 1.23%) (RR 1.31, 95 CI 0.94,1.814, p=0.11).

Conclusion(s): This study demonstrates an increased risk of developing PPD in patients who conceive with ART compared to natural conception in the overall cohort and in White, Black, and Hispanic subgroups. Although the overall risk for PPD following ART is highest in White patients, Black and Hispanic patients who undergo ART face a larger risk compared to those who conceive naturally. Providers should be aware of a potential increased risk for PPD development in patients who conceive from ART.

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References:

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