Bupropion for Major Depressive Disorder and Smoking Cessation in Pregnancy. A Systematic Literature Review

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Introduction and Aims: Bupropion is an antidepressant re-purposed to support nicotine cessation. Both nicotine use and depressive disorder are high prevalence disorders in pregnancy, with known adverse maternal and fetal outcomes. This review evaluates the effectiveness of bupropion for smoking cessation and depression in pregnancy and on birth outcomes following bupropion exposure during pregnancy.

Method: A systematic literature review was performed in February 2018 for published clinical studies investigating bupropion use in pregnancy.

Results: Ten studies reported on adverse fetal outcomes: negative findings include a slightly elevated risk of ventricular septal defect and a slightly elevated risk of left outflow tract heart defects, however, most studies found no elevated risk of malformations. One study reported increased risk of ADHD with bupropion, another no adverse associations related to birthweight and prematurity, however did report an increased rate of spontaneous abortion. Four studies measured effectiveness for nicotine cessation in pregnant women, all found indicators that smoking was reduced, but none found a association with sustained tobacco abstinence. While there were no studies primarily measuring the effectiveness of bupropion for depression for pregnant women, one small study (n=56), did show promising results.

Conclusions: Overall, the literature comprised of small sample size studies which utilised different methodologies and included multiple variables, making between group comparison difficult. Only (three Studies were randomised controlled trial n=156). Future prospective controlled cohort studies may be able to determine the causality and temporality of observed fetal malformations, and larger randomised controlled trials may elucidate effectiveness of bupropion as an intervention for smoking cessation and depression in pregnant women.

Implications for Practice: While there are possible risks with its use in pregnancy, bupropion may be considered for smoking cessation during pregnancy where other approaches (e.g. Nicotine replacement therapy) have failed or are not clinically appropriate and the benefits outweigh the risks.

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References:


