

Accepted Manuscript

Maternal and perinatal outcomes associated with the use of renin-angiotensin system (RAS) blockers for chronic hypertension in early pregnancy

Bilal Ahmed, Duong T. Tran, Helga Zoega, Sean E. Kennedy, Louisa R. Jorm, Alys Havard

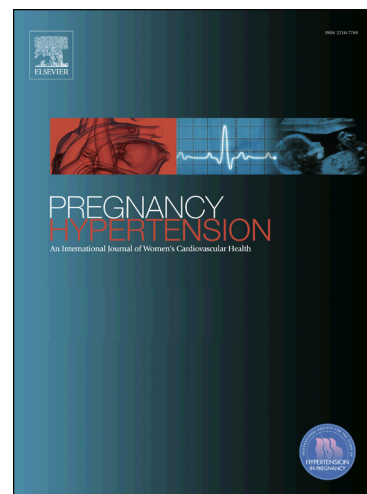
PII: S2210-7789(18)30066-7
DOI: <https://doi.org/10.1016/j.preghy.2018.09.010>
Reference: PREGHY 513

To appear in: *Pregnancy Hypertension: An International Journal of Women's Cardiovascular Health*

Received Date: 1 March 2018
Revised Date: 18 September 2018
Accepted Date: 30 September 2018

Please cite this article as: Ahmed, B., Tran, D.T., Zoega, H., Kennedy, S.E., Jorm, L.R., Havard, A., Maternal and perinatal outcomes associated with the use of renin-angiotensin system (RAS) blockers for chronic hypertension in early pregnancy, *Pregnancy Hypertension: An International Journal of Women's Cardiovascular Health* (2018), doi: <https://doi.org/10.1016/j.preghy.2018.09.010>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Maternal and perinatal outcomes associated with the use of renin-angiotensin system (RAS) blockers for chronic hypertension in early pregnancy

Ahmed Bilal¹, Tran Duong T¹, Zoega Helga^{1,3} Kennedy Sean E², Jorm Louisa R¹, Havard Alys¹
¹ Centre for Big Data Research in Health, University of New South Wales, Sydney, Australia; ²School of Women's & Children's Health, University of New South Wales (NSW), Sydney, Australia, ³Centre of Public Health Sciences, Faculty of Medicine, University of Iceland, Reykjavk, Iceland

Corresponding author:

Bilal Ahmed

Pharm D, MSc (epidemiology and biostatistics)

Doctoral candidate at Centre for Big Data Research in Health

UNSW, Sydney

Australia

Telephone +61-0451420314

E-mail: b.ahmed@student.unsw.edu.au

Abstract

Objective:

Previous research reported greater risk of adverse perinatal outcomes associated with first trimester exposure to angiotensin converting enzyme inhibitors (ACEIs) in comparison to unexposed pregnancies among non-hypertensive women. We examined the relationship between first trimester exposure to ACEIs and angiotensin receptor blockers (ARBs), and maternal and perinatal outcomes, whilst controlling for the underlying hypertension.

Study design:

We performed a population-based cohort study among 130,061 pregnancies resulting in birth in NSW, Australia between 2005 and 2012. Birth data were linked to hospital discharge and pharmaceutical dispensing records. After restricting to women with chronic hypertension, 67 and 73 pregnancies exposed to ACEIs and ARBs respectively during the first trimester were compared with 316 pregnancies exposed to methyldopa.

Study outcomes:

Preterm delivery, caesarean section, low birth weight, small for gestational age and Apgar score <7.

Results:

Compared to pregnancies exposed to methyldopa, the adjusted odds ratio (aOR) for ACEI exposure was 0.5 (95% CI: 0.2 - 1.1) for preterm delivery, 1.6 (0.8 - 3.1) for caesarean section, 0.6 (0.2 - 1.3) for LBW and 0.8 (0.4 - 1.9) for SGA. The corresponding aORs and confidence intervals for ARB exposure were 0.7 (0.3 - 1.5), 1.2 (0.6-2.6), 1.3 (0.7 - 2.6), and 1.2 (0.6 - 2.4).

Conclusion:

No association between early pregnancy exposure to ACEIs and ARBs and perinatal outcomes was observed, however, the possibility of an association cannot be ruled out due to limited power. Nonetheless, this study suggests that the magnitude of risk is smaller than that reported previously.

Introduction

Angiotensin-converting enzyme inhibitors (ACEIs) and angiotensin receptor blockers (ARBs), collectively known as renin-angiotensin system (RAS) blockers are amongst first-

Download English Version:

<https://daneshyari.com/en/article/11033691>

Download Persian Version:

<https://daneshyari.com/article/11033691>

[Daneshyari.com](https://daneshyari.com)