University of Groningen

Hypertensive disorders of pregnancy

Pereira Bernardes, Thomas Patrick Custodio Heinrich

DOI:
[10.33612/diss.99788387](https://doi.org/10.33612/diss.99788387)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2019

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):
Pereira Bernardes, T. P. C. H. (2019). *Hypertensive disorders of pregnancy: occurrence, recurrence, and management*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen.
<https://doi.org/10.33612/diss.99788387>

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Hypertensive disorders of pregnancy

Occurrence, recurrence, and management

Thomas Patrick Bernardes

2019

The research presented in this thesis was carried out at the Department of Epidemiology of the University Medical Center Groningen (The Netherlands) and financially supported by the Abel Tasman Talent Program, University of Groningen.

Printing of this thesis was financially supported by the University Library and the SHARE Research Institute of the Graduate School of Medical Sciences.

Hypertensive disorders of pregnancy
Occurrence, recurrence, and management

ISBN (printed): 978-94-034-2123-0

ISBN (digital): 978-94-034-2122-3

Layout & cover design: Emilia Bigaeva

Printed by: Ipskamp Printing, Enschede

© Copyright 2019, TP Bernardes

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without written permission of the author and the publisher holding respective copyrights of the published articles, if applicable.

university of
 groningen

Hypertensive disorders of pregnancy

Occurrence, recurrence, and management

PhD thesis

to obtain the degree of PhD at the
 University of Groningen
 on the authority of the
 Rector Magnificus Prof. C. Wijmenga
 and in accordance with
 the decision by the College of Deans.

This thesis will be defended in public on

Wednesday 6 November 2019 at 11.00 hours

by

Thomas Patrick Custodio Heinrich Pereira Bernardes

born on 09 April 1982
 in São Paulo, Brazil

Supervisors

Prof. H.M. Boezen

Prof. P.P. van den Berg

Prof. B.W. Mol

Co-supervisor

Dr. H. Groen

Assessment Committee

Prof. J.J.H.M. Erwich

Prof. M. Spaanderman

Prof. Y.T. van der Schouw

Paranymphs

Anja Kerstin Pereira Bernardes

Emilia Bigaeva

(...)

*We, this people, on this small and drifting planet
Whose hands can strike with such abandon
That in a twinkling, life is sapped from the living
Yet those same hands can touch with such healing, irresistible tenderness
That the haughty neck is happy to bow
And the proud back is glad to bend
Out of such chaos, of such contradiction
We learn that we are neither devils nor divines*

*When we come to it
We, this people, on this wayward, floating body
Created on this earth, of this earth
(...)*

Excerpt from "A brave and startling truth", Maya Angelou

Contents

INTRODUCTION

11

PART I

2

RECURRENCE RISK OF PRE-ECLAMPSIA IN A LINKED POPULATION-BASED COHORT: EFFECTS OF FIRST PREGNANCY MAXIMUM DIASTOLIC BLOOD PRESSURE AND GESTATIONAL AGE

29

Pregnancy Hypertension, 2019

3

EARLY AND LATE ONSET PRE-ECLAMPSIA AND SMALL FOR GESTATIONAL AGE RISK IN SUBSEQUENT PREGNANCIES

47

Submitted

PART II

4

RELEVANCE OF INDIVIDUAL PARTICIPANT DATA META-ANALYSIS FOR STUDIES IN OBSTETRICS: DELIVERY VERSUS EXPECTANT MONITORING FOR HYPERTENSIVE DISORDERS OF PREGNANCY

69

European Journal of Obstetrics & Gynecology and Reproductive Biology, 2015

5

DELIVERY OR EXPECTANT MANAGEMENT FOR PREVENTION OF ADVERSE MATERNAL AND NEONATAL OUTCOMES IN HYPERTENSIVE DISORDERS OF PREGNANCY: AN INDIVIDUAL PARTICIPANT DATA META-ANALYSIS

79

Ultrasound in Obstetrics & Gynecology, 2019

**CESAREAN SECTION RATES AND ADVERSE NEONATAL
OUTCOMES AFTER INDUCTION OF LABOR VERSUS
EXPECTANT MANAGEMENT IN WOMEN WITH AN UNRIPE
CERVIX: A SECONDARY ANALYSIS OF THE HYPITAT AND
DIGITAT TRIALS**

British Journal of Obstetrics and Gynaecology - BJOG, 2016

105

SUMMARY, GENERAL DISCUSSION AND PERSPECTIVES

125

NEDERLANDSE SAMENVATTING

142

SUMÁRIO EM PORTUGUÊS DO BRASIL

146

CO-AUTHOR AFFILIATIONS

150

ACKNOWLEDGEMENTS

154

ABOUT THE AUTHOR

156

RESEARCH INSTITUTE SHARE

158