



Universiteit
Leiden
The Netherlands

Neonatal hematological and biochemical complications in TTTS and TAPS

Verbeek, L.I.

Citation

Verbeek, L. I. (2017, June 13). *Neonatal hematological and biochemical complications in TTTS and TAPS*. Retrieved from <https://hdl.handle.net/1887/49516>

Version: Not Applicable (or Unknown)

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/49516>

Note: To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/49516> holds various files of this Leiden University dissertation

Author: Verbeek, Lianne

Title: Neonatal hematological and biochemical complications in TTTS and TAPS

Issue Date: 2017-06-13

Neonatal hematological and
biochemical complications
in TTTS and TAPS

Neonatal hematological and biochemical complications in TTTS and TAPS

© Lianne Verbeek, 2017, Leiden, The Netherlands

No part of this thesis may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy or any information storage or retrieval system, without permission of the copyright owner.

ISBN: 978-90-9030370-3

Cover design: Lianne Verbeek, Maikel Rolvink

Design: Robert Huiberts

Printing: Zalsman Print B.V.

The research presented in this thesis was performed at the Department of Pediatrics, Leiden University Medical Center, The Netherlands.

The publication of this thesis was financially supported by afdeling kindergeneeskunde LUMC, afdeling verloskunde LUMC, BMA B.V. (Mosos), Chiesi pharmaceuticals B.V., KARL STORZ Endoscopie Nederland B.V., Toshiba Medical Systems Nederland, Vaco2Med en Vygon Nederland B.V.

Neonatal hematological and biochemical complications in TTTS and TAPS

Proefschrift

ter verkrijging van
de graad van Doctor aan de Universiteit Leiden,
op gezag van Rector Magnificus prof. mr. C.J.J.M. Stolker,
volgens besluit van het College voor Promoties
te verdedigen op dinsdag 13 juni 2017
klokke 13:45 uur

door

Lianne Irene Verbeek
geboren te Rijswijk in 1990

Promotoren: Prof. Dr. E. Lopriore

Prof. Dr. D. Oepkes

Leden promotiecommissie: Prof. Dr. A. Lankester

Prof. Dr. C.M. Fijnvandraat
*Emma Children's Hospital, Academic Medical Center,
Amsterdam, The Netherlands*

Dr. A. Khalil
*St George's Medical School, University of London,
London, United Kingdom*

Contents

| | | |
|--------------------------------|--|-----|
| Chapter 1 | General introduction | 11 |
| Hematological disorders | | |
| Chapter 2 | Hematological disorders at birth in complicated monochorionic twins <i>Expert Rev Hematol. 2016 Dec. In Press</i> | 19 |
| Chapter 3 | Hemoglobin differences in uncomplicated monochorionic twins in relation to birth order and mode of delivery <i>Twin Res Hum Genet. 2016 Jun;19(3):241-5</i> | 37 |
| Chapter 4 | Hemoglobin discordances in twins: due to differences in timing of cord clamping? <i>Arch. Dis Child. Fetal Neonatal Ed. 2016 Dec 9.</i> | 49 |
| Biochemical disorders | | |
| Chapter 5 | Hypoalbuminemia in donors with twin-twin transfusion syndrome <i>Fetal Diagn Ther. 2013;33(2):98-102</i> | 61 |
| Chapter 6 | Hypoalbuminemia in donors with twin anemia-polycythemia sequence:a matched case-control study <i>Fetal Diagn Ther. 2013;33(4):241-5</i> | 71 |
| Chapter 7 | Short-term postnatal renal function in twin anemia-polycythemia sequence <i>Fetal Diagn Ther. 2016;39(3):192-7</i> | 83 |
| Chapter 8 | Renal function in neonates with twin-twin transfusion syndrome treated with or without fetoscopic laser surgery <i>Submitted</i> | 95 |
| Chapter 9 | General discussion and future perspectives | 107 |
| Chapter 10 | Summery/samenvatting | 121 |
| Chapter 11 | Appendices List of abbreviations Authors and affiliations Dankwoord (acknowledgements) Publications Curriculum vitae | 133 |

