

Hypertensive disorders of pregnancy after multifetal pregnancy reduction: a systematic review and meta-analysis

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RESULTS

- Thirty studies with a total of 9,811 women were included.
- MFPR from triplet to twin was associated with lower risk for HDP compared to ongoing triplets (OR 0.55, 95% CI 0.37-0.83, p=0.004).
- In a subgroup analysis the decreased risk of HDP was driven by GH, and PE was no longer significant (OR 0.34, 95% CI, 0.17-0.70, p=0.004 and OR 0.64, 95% CI 0.38-1.09, p=0.10, respectively).
- HDP was also significantly lower after MFPR from all higher-order (including triplets) to twin compared to ongoing triplets (OR 0.55, 95% CI, 0.38-0.79, p=0.001).
- In a subgroup analysis the decreased risk of HDP was driven by PE, and GH was no longer significant (OR 0.55, 95% CI 0.32-0.92, p=0.02 and OR 0.55, 95% CI 0.28-1.06, p=0.08, respectively).

DISCUSSION

- This meta-analysis suggests that MFPR in women with triplet and higher-order multifetal pregnancies decreases the risk of HDP compared to women with ongoing triplet pregnancies.
- For MFPR from triplet to twin versus ongoing triplets this is driven by GH and for MFPR from higher-order to twin versus ongoing triplets this is driven by PE.
- These data can be used in the decision-making process of MFPR, in which the individual risk factors of HDP can be taken into account.

INTRODUCTION

- Multifetal pregnancies are associated with an increased risk of maternal and perinatal morbidity and mortality compared to singleton pregnancies.
- Multifetal pregnancy reduction (MFPR) can be considered to reduce the total number of fetuses by one or more.

OBJECTIVE

- To systematically review the literature on hypertensive disorders of pregnancy (HDP) after MFPR.

METHODS

- A comprehensive search in PubMed, Embase, Web of Science and Scopus was performed.
- Prospective or retrospective studies reporting on MFPR from triplet or higher-order to twin compared to ongoing (i.e. non-reduced) triplets and/or twins were included.
- A meta-analysis of the primary outcome HDP was carried out using a random-effects model.
- Subgroup analyses of gestational hypertension (GH) and preeclampsia (PE) were performed.
- Risk of bias was assessed using the Newcastle-Ottawa Quality Assessment Scale.

Highlights:
MFPR in women with triplet and higher-order multifetal pregnancies decreases the risk of HDP. Twelve women should undergo MFPR to prevent one case of HDP.

Figure 1. HDP after MFPR in triplets and higher-order to twin pregnancy versus ongoing triplet pregnancies

