RECONSIDERING THE EFFICACY OF LOW-DOSE ASPIRIN IN PREVENTION OF PREECLAMPSIA AMONG OTHERWISE LOW RISK TWIN GESTATIONS

Shlomi Toussia-Cohen, MD[1], Inna Zaslavsky-Paltiel, MSc[2], Adel Farhi, Ph.D[2], Yael Brantz, MD[1], Dror Maymon, MD[1], Raanan Meyer, MD[1], Yoav Yinon, MD[1], Liat Lerner-Geva, MD Ph.D[2], Abraham Tsur, MD[1,2]

[1]Department of Obstetrics and Gynecology, The Sheba Medical Center, Tel Hashomer, Israel,

[2] The Gertner Institute for Health Policy and Epidemiology

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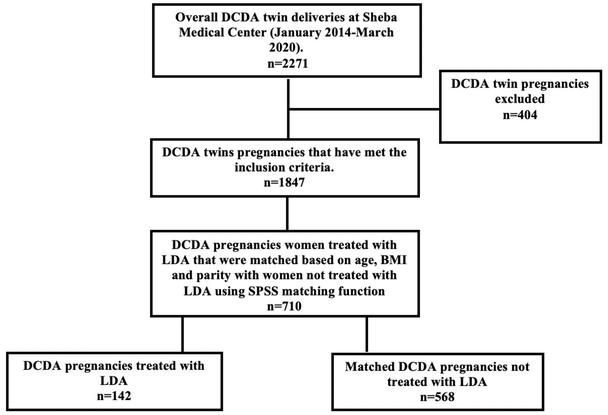
INTRODUCTION & OBJECTIVE

The United States Preventive Services Task Force (USPSTF) has defined multifetal gestation as a major risk factor for preeclampsia (PE) indicating treatment with low dose aspirin (LDA). However, there is scarce data regarding the efficacy of LDA among twin and higher-order pregnancies.

We sought to assess the efficacy of LDA in preventing preterm PE and other placenta mediated complications among dichorionic diamniotic (DCDA) twin gestations.

The primary outcome was defined as PE occurring before 37 weeks of gestation (preterm PE), similar to the ASPRE trial.

SELECTION OF STUDY GROUPS



METHODS

A historical cohort consisting of all women carrying a DCDA twin pregnancy that delivered at our tertiary medical center between 2014 and 2020.

To prevent confounding by other major PE risk factors, women with one or more of these conditions defined by the USPSTF were excluded: Previous PE, chronic hypertension, pregestational diabetes, renal disease, systemic lupus erythematous and antiphospholipid syndrome.

Women treated with LDA were matched 1:4 to women that were not treated with LDA by age, BMI and parity, in order to adjust for moderate risk factors as defined by the USPSTF.

RESULTS

142 women were treated with LDA and compared with a 1:4 matched group of 568 women that were not treated with LDA.

The two groups did not significantly differ in the in the primary outcome of preterm PE (12.7% in the LDA group VS 9.7% in the no LDA group; P =0.29. aOR 1.36 95% CI 0.77-2.40).

Of notice, gestational age at delivery among LDA group was two days earlier, significant statistically (P=0.01) although not clinically.

There were no significant differences in any other placental mediated complication or related outcomes.

MATERNAL OUTCOMES

	LDA (N=142) N (%)	NO LDA (N=568) N (%)	*P* values
Preterm PE	18 (12.7%)	55 (9.7%)	0.29
Overall PE	19 (13.4%)	63 (11.1%)	0.45
Preterm HDP	25 (17.6%)	80 (14.1%)	0.29
Overall HDP	27 (19.0%)	107 (18.8%)	0.96
PE with severe features	11 (7.8%)	36 (7.4%)	0.53
HELLP	0 (0%)	6 (1.1%)	0.61
Eclampsia	0 (0%)	1 (0.2%)	---
SGA	18 (12.7%)	93 (16.4%)	0.28
Placental abruption.	2 (1.4%)	11 (1.9%)	0.99
PPH	16 (11.4%)	40 (7.1%)	0.09
GA at delivery (mean)	35 weeks 4 days	35 weeks 6 days	0.01

PE, preeclampsia; HDP, hypertensive disorders of pregnancy; SGA, small for gestational age defined based on local Dollberg curves for twin gestations; PPH, postpartum hemorrhage. GA, gestational age.

SUMMARY AND CONCLUSIONS

LDA treatment among multifetal gestation without additional major risk factors did not appear to reduce the risk of preterm PE or other placental mediated complications. These findings indicate the urgent need for randomized controlled trials reassessing the clinical efficacy of LDA among twin and higher order gestations