

## Impact of first trimester screening for preeclampsia in women having conceived through assisted reproductive techniques

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### Objective

The aim of the study was to evaluate the impact of first trimester screening for preeclampsia in women who underwent a pregnancy after assisted reproductive treatment (ART).

### Methods

We performed a retrospective cohort study of 39 patients who underwent a pregnancy through ART between 2019 and 2021. Those patients having had a combined first trimester screening for preeclampsia based on maternal characteristics and medical history, mean arterial pressure, uterine artery pulsatility index and PIGF were enrolled. The calculation is based on equations corrected by clinical practice and the risk is given in Mom. (Roche° SSDwLab). Risks of early-onset (before 34 weeks of amenorrhea) and late-onset (after 34 weeks of amenorrhea) of preeclampsia are differentiated.

### Results

Five women were screened to be at risk for late-onset- (12,8%) and 4 were at risk for early-onset of preeclampsia (10,25%). Two patients were at risk of both types of PE. Thirty were screened at low risk for PE. In the intrauterine insemination population, there were any high-risk patients. However, in the population of embryo transfer pregnancies, 4 of those patients were at high risk. In the study population of 39 patients, 2 women developed preeclampsia (one at 32 weeks of amenorrhea and the other at 35 weeks of amenorrhea). Those women were screened at low risk of preeclampsia. Women at high risk were treated with acetylsalicylic acid and didn't develop preeclampsia.

### Conclusion

First trimester screening for preeclampsia should also be offered in the population of women having conceived through assisted reproductive technique. Based on our small cohort, women who underwent an embryo transfer seems to be at higher risk for PE. However, screening has some limitations and adapted pregnancy follow-up is recommended for every women.

	Early-onset preeclampsia rate	Late-onset preeclampsia rate
Total	4	5
Intrauterine insemination	0	0
Fresh embryo transfer	1	2
Frozen embryo transfer Artificial cycle	0	1
Frozen embryo transfer Natural cycle	0	1
Assisted reproductive treatment not known	3	1