

Pre-eclampsia Case Study

Lara is a 28-year-old PE teacher in her 1st pregnancy. She had her appendix removed at age 10 but is otherwise fit & well, her BMI is 21 and there's no family history of HT or cardiovascular disease. You have performed her routine antenatal bloods, urine, 3-gene carrier testing and dating scan which are all normal. Her husband had an older half-brother who died in infancy due to complications of congenital heart disease.

You have referred her for a combined first trimester screen with NIPT. Her results are:

Fetal Biometry & Anatomy: single fetus, CRL 75mm, BPD 23mm, NT 1.8mm.

Measurements are equivalent to 13 weeks and 1 day. Normal anatomy.

Chromosome assessment: No aneuploidy detected on cell-free DNA. (Fraction 9%)

Pre-eclampsia risk assessment: free beta-HCG 0.6MoM, PAPP-A 1.0MoM, PlGF 0.6MoM. Mean uterine artery pulsatility index 2.3, Mean arterial BP = 86mmHg.

Risk for pre-eclampsia development before 37 weeks: 1:94 HIGH

Lara was told to see her shared care GP to follow-up the result ASAP. She sees you the day after her scan to discuss the findings and is understandably anxious. Do you:

- A) Reassure her the fetus is low risk for trisomy but remained surprised at her risk for pre-eclampsia given how fit she is. You offer to check her BP more often.
- B) Advise that aspirin is recommended but ultimately her choice.
- C) Discuss the findings but let the hospital obstetric staff make the decision about aspirin when she has her booking visit in a few weeks' time. 1 in 94 is close to the cut off and she is healthy.
- D) Start 150mg aspirin today.

Discussion: The risk for preterm pre-eclampsia is considered high when 1% (1 in 100) or greater. There is strong evidence to support a daily dose of aspirin (150mg taken at night), and it should be commenced prior to 16 weeks. The multi-centre ASPRE trial recommends starting prior to 14 weeks and to continue to 36 weeks gestation.

Aspirin reduces the prevalence of pre-eclampsia by >60%. Answer is D.

Patient brochure on Pre-eclampsia screening:

<https://www.slhd.nsw.gov.au/RPA/WomenAndBabies/pdfs/OGUFM.pdf>

References:

Prenatal Screening and Diagnosis of Fetal and Maternal conditions. https://sydney.communityhealthpathways.org/24172_1.htm

Australian Pregnancy Care guidelines. (Australian Government Dept of Health and Aged Care) <https://app.magicapp.org/#/guideline/9748>

ASPRE trial. <https://www.nejm.org/doi/full/10.1056/NEJMoa1704559>