PRE ECLAMPSIA: PRE CONCEPTION COUNSELLING FOR WOMEN WITH A HISTORY OF, OR SIGNIFICANT RISK FACTORS

BACKGROUND INFORMATION

The risk of recurrence of pre-eclampsia depends on the presence or absence of risk factors, gestational age at the time of onset, and the severity of pre-eclampsia in the previous pregnancy. Pre-eclampsia complicates 2–3% of all pregnancies and the risk of recurrent preeclampsia in a second pregnancy was found to vary according to the gestational age at delivery in the first pregnancy. The risk is progressive, with the greatest risk attributed to those women who were delivered earliest in the previous pregnancy.

KEY POINTS

1. All women with significant risk factors for developing pre-eclampsia planning a future pregnancy should be counselled appropriately about risk factors, symptoms and management.
2. Women at significant risk of developing pre-eclampsia should be offered calcium and low dose aspirin supplements.
3. Women planning a pregnancy who are at significant risk for developing pre-eclampsia should receive preconception counselling by appropriate obstetrician or obstetric physician.

SIGNIFICANT RISK FACTORS OF DEVELOPING PRE-ECLAMPSIA

It is likely that development of preeclampsia requires a combination of underlying susceptibility and a triggering event. Many susceptibility factors for preeclampsia have been identified (see Table below) but to date no accurate predictive tool, using either clinical or laboratory markers, has been developed. Such a tool applied early in pregnancy would allow intervention that might modify outcomes.

HYPERTENSION IN PREGNANCY
Risk factors associated with preeclampsia

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Relative Risk [95% CI]</th>
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<tbody>
<tr>
<td>Previous history of pre eclampsia</td>
<td>7.19 [5.85, 8.83]</td>
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<tr>
<td>Antiphospholipid antibodies</td>
<td>9.72 [4.34, 21.75]</td>
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<tr>
<td>Pre-existing diabetes</td>
<td>3.56 [2.54, 4.99]</td>
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<tr>
<td>Multiple pregnancy</td>
<td>2.91 [2.04, 4.21]</td>
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<td>Nulliparity</td>
<td>2.91 [1.28, 6.61]</td>
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<td>Family history of pre eclampsia</td>
<td>2.90 [1.70, 4.93]</td>
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<td>Elevated BMI &gt;25</td>
<td>2.47 [1.66, 3.67]</td>
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<tr>
<td>Maternal age ≥ 40</td>
<td>1.96 [1.34, 2.87]</td>
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<tr>
<td>Diastolic BP ≥ 80mmHg at booking</td>
<td>1.38 [1.01, 1.87]</td>
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A number of other factors are also associated with an increased risk of preeclampsia including chronic hypertension, pre-existing renal disease, autoimmune disease, >10 years since previous pregnancy, short sexual relationship prior to conception, other thrombophilies e.g. Factor V Leiden and possibly periodontal disease, maternal age < 20 yrs or ≥ 35 yrs.

**WOMEN RECOMMENDED TO ATTEND PRECONCEPTION COUNSELING, OR EARLY AS POSSIBLE IF PREGNANT**

Preconception counselling and early pregnancy referral to KEMH is recommended for women with:
- a history of pre-eclampsia prior to 34 weeks gestation or severe early onset pre-eclampsia < 28 wks gestation.
- thrombophilies (acquired or congenital)
- severe pre-gestational diabetes (Type 1 or Type 2)
- connective tissue disease e.g. systemic lupus erythematosus (SLE), rheumatoid arthritis
- chronic renal disease

**MANAGEMENT STRATEGIES FOR PREVENTION OF PRE-ECLAMPSIA**

**CALCIUM SUPPLEMENTATION**

Calcium supplement supplementation appears to almost halve the risk of pre-eclampsia and reduces the rare occurrence of the composite outcome ‘death or serious morbidity’. There were no other clear benefits, or harms.

Offer all women at increased risk of pre-eclampsia (particularly women with a low dietary calcium intake) calcium supplements of 1200mg – 2000mg daily.

**LOW DOSE ASPIRIN**

Low dose aspirin (100mg) has moderate benefits when used for prevention of pre-eclampsia and its consequences, and is safe to use in pregnancy. In view of this potential benefit, and the relative absence of maternal or neonatal complications, low dose aspirin is indicated for the secondary prevention of pre-eclampsia in women at increased risk. In most cases, aspirin may be ceased at 37 weeks gestation although continuation beyond this period is not unsafe.

**USE OF CLEXANE WITH ASPIRIN**

Clexane is used with aspirin for patients with Antiphospholipid syndrome in consultation with the Maternal Fetal Medicine specialist or the Obstetric Physician.
ANTIOXIDANTS\textsuperscript{10}
Vitamin C, vitamin E\textsuperscript{2, 11, 12}, Fish Oil, Selenium and Lycopene provide no benefit\textsuperscript{10}.

REFERENCES (STANDARDS)
2. Royal College of Obstetricians and Gynaecologists. Pre-eclampsia study group statement. RCOG. 2011; \url{http://www.rcog.org.uk/womens-health/clinical-guidance/pre-eclampsia-study-group-consensus-statement}.