Scottish Parliament to Debate Pre-eclampsia Testing

On March 3rd 2020 the Scottish Parliament will debate pre-eclampsia testing in Scotland (motion can be accessed here.) Action on Pre-eclampsia is the UK's predominant charity for families who have suffered pre-eclampsia, to bring you up to date on the key issues you may like to know about before the debate takes place.

1 – What is Pre-eclampsia?

Hypertension, or high blood pressure, is the most common medical problem that is encountered in pregnancy. In general, around 10% of pregnancies are complicated by hypertension.
Mild pre-eclampsia affects up to 10% of first-time pregnancies with severe pre-eclampsia affecting about 1-2 in 100 severe pregnancies. Pre-eclampsia is the most common of the serious complications of pregnancy. It is caused by a poorly functioning placenta, (also known as the afterbirth), which joins the mother and baby and supplies the baby with nutrients and oxygen from the mother's blood. While we do not know yet exactly what is the root cause of pre-eclampsia, medical science is expanding our knowledge every day. By definition, pre-eclampsia occurs after 20 weeks (but in very rare cases can occur earlier) and the majority of cases occur in the last three months.
In its early stages, pre-eclampsia does not cause symptoms and is only detectable by regular antenatal visits where the woman's blood pressure and urine are checked. Pre-eclampsia is known as a multi-system disorder which means it can affect different parts of the body such as the liver, kidneys, cardiovascular system or clotting systems.
For further information please see here https://action-on-pre-eclampsia.org.uk/

2 – Why is this debate taking place?

Placental Growth Factor Testing has been part of NICE guidelines since 2016. Following the PARROT trial in 2019, NHS England announced that PlGF testing would be made available through the Rapid Uptake Programme of the NHS England Accelerated Access Collaborative in order to ensure implementation of this recommended test.
Details here https://www.england.nhs.uk/aac/what-we-do/what-innovations-do-we-support/rapid-uptake-products/pigf-based-testing/
News article here - https://www.independent.co.uk/news/health/preeclampsia-test-nhs-pregnant-stroke-seizure-diagnosis-a8849966.html
This test is not yet available in Scotland, although it is been taken up by the majority of Trusts in England.

3 – Why is this test important?

It has been shown that PlGF testing leads to

- Reduced demand on maternity services
- Improved patient safety through faster and accurate diagnosis
- Potential to reduce admissions for suspected pre-eclampsia in lower-risk women
- Improved patient experience, reducing anxiety and hospital admissions
- Reduced unnecessary inpatient monitoring tests

During the PARROT trial, use of the PLGF test alongside blood pressure and urine checks reduced the average time to diagnosis from 4.1 days to 1.9 days, compared with traditional methods. It also cut the rate of serious maternal complications before birth such as eclampsia, stroke and maternal

death from 5.3% to 3.8%. There was also no increased risk to babies, with no increase in premature deliveries or admissions to a neonatal unit.
The guidance recommended the following two technologies to help rule out pre-eclampsia:

- Triage PlGF test (Quidel Corporation)
- Elecsys immunoassay sFlt-1/PlGF ratio (Roche Diagnostics)

PlGF-based tests are currently used alongside clinical judgement to help rule out pre-eclampsia. NICE's adoption team worked with NHS clinicians, with experience in using the Triage PlGF and Elecsys immunoassay sFlt-1/PlGF ratio tests, to share their learning of planning the adoption of this guidance.

4 – Why is this not happening in Scotland?

This question was asked of the Cabinet Secretary for Health and Sport
Question S5W-27311: Alex Cole-Hamilton, Edinburgh Western, Scottish Liberal Democrats, Date Lodged: 05/02/2020
"To ask the Scottish Government for what reason it is reportedly waiting until the findings of the PARROT 2 study (Placental Growth Factor to Assess and Diagnose Hypertensive Pregnant Women: a Stepped-wedge Trial) are published before it considers introducing blood testing of placental growth factor (PlGF), in light of the 2016 NICE guidelines recommending the use of PlGF and the method being in place in England."
Answered by Jeane Freeman (20/02/2020):
"The Scottish Government recognises that placental growth factor (PlGF) testing shows promise in improving the detection and diagnosis of pre-eclampsia. However, while NICE Guideline [NG 133] Hypertension in Pregnancy: diagnosis and management, published in June 2019, indicates that women with suspected pre-eclampsia should be offered PlGF testing, the Diagnostics Guidance [DG 23] indicates that there is currently insufficient evidence to recommend the routine adoption of PlGF testing for diagnosing pre-eclampsia. The Diagnostics Guidance [DG 23] is explicit in its recommendations for further research to explore repeat testing further.
The Scottish Government recognises that it is essential to ensure that pre-eclampsia is diagnosed and treated as soon as possible. NHS Lothian is taking part in PARROT 2, an independent research study looking at repeat testing. The Scottish Government will continue to follow the results of both PARROT and PARROT 2 with interest and the Women's Health Team continues to consider the adoption of PlGF testing in Scotland in light of emerging evidence."

5 – Why does this not go far enough?

PlGF testing has been shown to be safe, cost effective and lifesaving. The NICE guidance (DG23) is clear in its very first recommendation:
1.1 The Triage PlGF test and the Elecsys immunoassay sFlt-1/PlGF ratio, used with standard clinical assessment and subsequent clinical follow-up, are recommended to help rule-out pre-eclampsia in women presenting with suspected pre-eclampsia between 20 weeks and 34 weeks plus 6 days of gestation.
The NICE guidance does not indicate that further evidence is needed before routine adoption of PlGF testing guidance. It does recommend further research on repeat testing (i.e. beyond the first test) and this is the specific area that the PARROT-2 trial is evaluating.

6 – What are the consequences of non-implementation?

PlGF-based testing rules out with high accuracy the chances of a woman developing pre-eclampsia requiring delivery in the next 14 days.
It means that care can be targeted, unnecessary admissions reduced, and family life can be less disrupted, whilst women who are at greater risk can receive appropriate surveillance so that complications can be reduced.
An economic evaluation performed by NICE showed a potential cost reduction of between £2,896 and £2,488 per patient compared with standard clinical assessment depending on the test used per patient using the Roche test so NHS Scotland could be saving money.
Prof Lucy Chappell, the Lead Investigator on PARROT said "Many tests have come into practice without robust assessment. This time, we have evaluated this new test and shown that it improves care and outcomes for pregnant women and their babies,"
APEC does not endorse one product over the other, but endorses PlGF-based testing.

7 – What is APEC calling for?

APEC wants to see the end of the postcode lottery, where women in Scotland are being unfairly and inequitably deprived of a test that could be lifesaving. Women and babies die from pre-eclampsia. 80,000 pregnancies are affected across the UK, 1000 babies die annually and these numbers could be reduced by pre-eclampsia testing using PlGF.