Spot protein–creatinine ratio and spot albumin–creatinine ratio in the assessment of pre-eclampsia: a diagnostic accuracy study with decision-analytic model-based economic evaluation and acceptability analysis

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Declared competing interests of authors: Edward Lamb reports that he was a member of the development groups for both the National Institute for Health and Care Excellence chronic kidney disease and Kidney Disease Improving Global Outcomes clinical guidelines, which have considered the relative accuracies of proteinuria and albuminuria testing.

Published October 2017
DOI: 10.3310/hta21610
Plain English summary

SPCR and SACR in assessment of pre-eclampsia
Health Technology Assessment 2017; Vol. 21: No. 61
DOI: 10.3310/hta21610

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Plain English summary

Pre-eclampsia (PE) occurs in pregnant women and stops after the baby is born. It starts in the placenta (which joins the mother and baby) and spreads, damaging blood vessels in the mother, and can cause fits, organ failure and death. The baby’s growth can slow and stillbirth can occur. If the mother’s kidneys are damaged, protein in the blood leaks through into the urine. This is proteinuria. Proteinuria and raised blood pressure (BP) are usually early signs of PE and pregnant women then go to hospital for more tests. Severe PE is a list of symptoms, signs and abnormal blood tests showing that PE is damaging the liver, kidney and brain. It includes very high BP.

This study looked at two hospital tests used to measure proteinuria: the spot protein–creatinine ratio (SPCR) test and the spot albumin–creatinine ratio (SACR) test. We wanted to know if these tests could identify women who are less likely to have severe PE.

The women we tested already had high BP and at least some protein in their urine. We found that:

- 4 in 10 women got severe PE
- when SPCR and SACR tests were negative they identified women who were 10 times less likely to get severe PE
- the tests did not show which babies would become ill
- doctors in the study put only one-third of women who got severe PE on a plan of special care.

These results could be used to help doctors decide which women with possible PE may not need so much intensive care.
Health Technology Assessment

ISSN 1366-5278 (Print)
ISSN 2046-4924 (Online)
Impact factor: 4.236

Health Technology Assessment is indexed in MEDLINE, CINAHL, EMBASE, The Cochrane Library and the Clarivate Analytics Science Citation Index.

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This report

The research reported in this issue of the journal was funded by the HTA programme as project number 10/65/02. The contractual start date was in September 2012. The draft report began editorial review in September 2016 and was accepted for publication in March 2017. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HTA editors and publisher have tried to ensure the accuracy of the authors’ report and would like to thank the reviewers for their constructive comments on the draft document. However, they do not accept liability for damages or losses arising from material published in this report.

This report presents independent research funded by the National Institute for Health Research (NIHR). The views and opinions expressed by authors in this publication are those of the authors and do not necessarily reflect those of the NHS, the NIHR, NETSCC, the HTA programme or the Department of Health. If there are verbatim quotations included in this publication the views and opinions expressed by the interviewees are those of the interviewees and do not necessarily reflect those of the authors, those of the NHS, the NIHR, NETSCC, the HTA programme or the Department of Health.

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