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Article:

Goodacre, S. and Hunt, B. (2016) The problem of pulmonary embolism diagnosis in pregnancy. *British Journal Of Haematology*. ISSN 0007-1048

<https://doi.org/10.1111/bjh.13893>

This is the peer reviewed version of the following article: Goodacre, S. and Hunt, B. (2016), The problem of pulmonary embolism diagnosis in pregnancy. *British Journal of Haematology*, which has been published in final form at <http://dx.doi.org/10.1111/bjh.13893>. This article may be used for non-commercial purposes in accordance with Wiley Terms and Conditions for Self-Archiving (<http://olabout.wiley.com/WileyCDA/Section/id-820227.html>).

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The problem of pulmonary embolism diagnosis in pregnancy

Ramsay et al [1] highlight an important diagnostic challenge. The consequences of missed pulmonary embolism (PE) in pregnancy are potentially catastrophic but over-investigation may be exposing women to unnecessary risks. Their estimate of 2% prevalence of PE in those receiving imaging is consistent with our experience [2] and recent reviews of cohorts of pregnant women with suspected PE [3] and pregnant women in studies of suspected PE [4].

Our recent review [3] explored whether clinical features, clinical predictions scores or biomarkers can be used to select women with suspected PE for imaging. We found that clinical predictors such as multiparity, Body Mass Index, complications of pregnancy, previous venous thromboembolism, peripheral oxygen saturation and modified Wells score may be used to identify women at higher risk of PE who could be selected for imaging, but none had been sufficiently validated to support a recommendation for clinical use.

The DiPEP study (Diagnosis of PE in Pregnancy) has been funded by the National Institute for Health Research Health Technology Assessment programme and is now in progress to address this issue [<http://www.controlled-trials.com/ISRCTN21245595>]. A case-control study is in progress to identify clinical predictors of PE, validate a clinical decision rule derived by expert consensus, derive a new clinical decision rule and test the diagnostic accuracy of a number of potential biomarkers. Decision analysis modelling will then compare the benefits, risks and costs of different testing strategies to identify the most clinically effective and cost-effective approach to diagnosing PE in pregnancy. The results are expected in 2017 and will hopefully provide a solution to the problem of over-investigation.

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Steve Goodacre

Professor of Emergency Medicine, University of Sheffield

Beverley Hunt

Professor of thrombosis and haemostasis, King's College London

Acknowledgement and disclaimer

The DiPEP study is funded by the National Institute for Health Research (NIHR) Health Technology Assessment programme. The views expressed are those of the authors and do not necessarily reflect the views of the NIHR.

Author contributions

SG and BH both contributed to drafting and critically reviewing the paper, and both approved the final draft.

Key words

Pulmonary embolism, pregnancy, diagnosis