AntiEpileptic drug Monitoring in PREgnancy (EMPiRE): a double-blind randomised trial on effectiveness and acceptability of monitoring strategies

Shakila Thangaratinam,1,2,3* Nadine Marlin,3 Sian Newton,1,3 Annalise Weckesser,4 Manny Bagary,5 Lynette Greenhill,5 Rachel Rikunenko,6 Maria D’Amico,1,3 Ewelina Rogozińska,1,2 Andrew Kelso,7 Kelly Hard,8 Jamie Coleman,9 Ngawai Moss,10 Tracy Roberts,11 Lee Middleton,12 Julie Dodds,1,2,3 Angela Pullen,13 Sandra Eldridge,3 Alexander Pirie,8 Elaine Denny,4 Doug McCorry5 and Khalid S Khan1,2,3 on behalf of the EMPiRE Collaborative Network

1Women’s Health Research Unit, Blizard Institute, Barts and the London School of Medicine and Dentistry, Queen Mary University of London, London, UK
2Multidisciplinary Evidence Synthesis Hub (mEsh), Blizard Institute, Barts and the London School of Medicine and Dentistry, Queen Mary University of London, London, UK
3Pragmatic Clinical Trials Unit, Blizard Institute, Barts and the London School of Medicine and Dentistry, Queen Mary University of London, London, UK
4Centre for Health and Social Care Research, Birmingham City University, Birmingham, UK
5Neuropsychiatry Department, The Barberry, Birmingham, UK
6Research and Development, Birmingham Children’s Hospital, Birmingham, UK
7Department of Neurology, Royal London Hospital, London, UK
8Research and Development, Birmingham Women’s Hospital, Birmingham, UK
9School of Clinical and Experimental Medicine, University of Birmingham, Birmingham, UK
10Patient and Public Involvement group member, Katie’s Team, Katherine Twining Network, Queen Mary University of London, London, UK
11Health Economics Unit, University of Birmingham, Birmingham, UK
12Birmingham Clinical Trials Unit, University of Birmingham, Birmingham, UK
13Epilepsy Action, Leeds, UK

*Corresponding author s.thangaratinam@qmul.ac.uk
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Disclaimer: This report contains transcripts of interviews conducted in the course of the research and contains language that may offend some readers.
Pregnant women with epilepsy who take medication for their seizures may have a decrease in the drug levels in their blood. This may worsen seizures. Some hospitals in the UK use regular blood tests to check the amount of drug in the mother’s blood and offer to increase the dose of the medication if the levels reduce. Most hospitals in the UK do not monitor drug levels because existing National Institute for Health and Care Excellence and Scottish Intercollegiate Guidelines Network guidelines recommend a strategy based on monitoring clinical features. There is a lack of evidence to support either management.

The AntiEpileptic drug Monitoring in PREgnancy (EMPiRE) study aimed to find out if routine blood tests to monitor drug levels in pregnancy is better than management based on only clinical findings in preventing seizures and avoiding complications in pregnancy. We obtained women’s views on the two strategies.

Of the 560 mothers with epilepsy on medication, the drug levels fell in 267 women. The risk of seizures and pregnancy complications as well as infants’ birthweight and mothers’ quality of life were similar in the group managed by monitoring drug levels regularly and in the group managed based on only clinical findings. We did not identify a link between an increase in seizures and a decrease in drug levels. Babies born to mothers whose drug levels were monitored regularly were exposed to a higher dose of the drug at birth. Women reported that the decisions that they make regarding epilepsy medication intake and dose are influenced by their feelings of responsibility for the health of their babies.

Our findings do not support regular blood monitoring of antiepileptic drug levels in pregnancy.
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This report

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