

SHORT-TERM POSTPARTUM BLOOD PRESSURE MANAGEMENT AND LONG-TERM BLOOD PRESSURE CONTROL: A RANDOMISED CONTROLLED TRIAL

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INTRODUCTION

Women with hypertensive pregnancies are four times more likely to develop chronic hypertension. In 2018, we reported the results of a randomised trial of blood pressure (BP) self-management (daily home BP monitoring and automated medication reduction via telemonitoring) compared with standard NHS led care on postpartum hypertension in 91 women across five hospital sites in England (NCT02333240). In the self-management cohort, diastolic BP was persistently lower for six months postpartum. We now report the impact of self-management on longer term BP control.

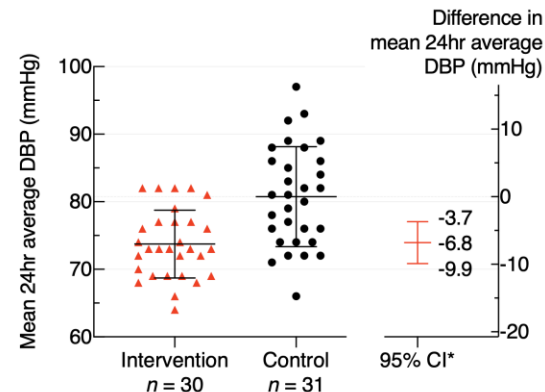
METHODS

We present a prospective long-term follow up of women from the original randomised trial cohort. 24-hour BP monitor data and data pertaining to traditional hypertensive risk factors were collected. The primary outcome was a comparison of between group 24-hour average diastolic BP, assessed by ambulatory BP monitoring.

RESULTS

61 of 70 eligible women were followed up at 3.6 ± 0.4 years postpartum. Women who undertook self-management of BP during the postpartum period had a lower mean (SD) 24-hour diastolic BP of 73.7 (5.0) mmHg compared with 80.7 (7.4) mmHg in the standard care group. This difference remained significant when adjusting for traditional hypertensive risk factors and BP immediately postpartum (adjusted mean difference -6.8 mmHg; 95% CI -9.9 to -3.7; $p < 0.001$).

Figure 1. 24-hour DBP adjusted for baseline blood pressure and salt intake at 4 years postpartum

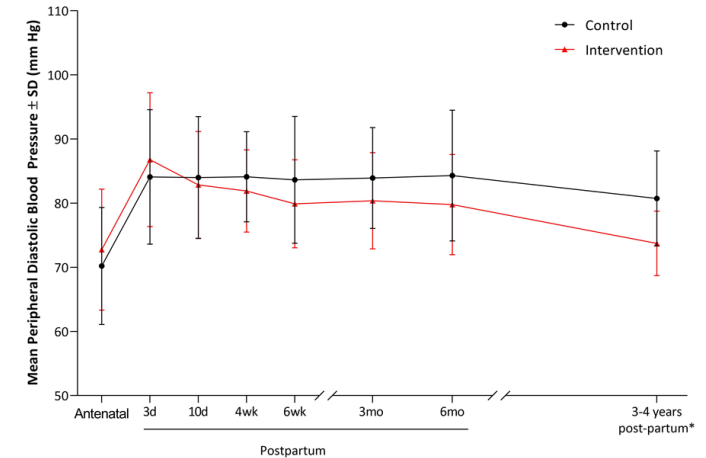


CI indicates confidence interval and DBP, diastolic blood pressure

DISCUSSION

Women three to four years post a hypertensive pregnancy who undertook BP self-management postpartum had persistently lower diastolic BP. This novel finding indicates that optimising BP control after hypertensive pregnancies through a safe and feasible intervention appears to reset BP levels in the longer term.

Figure 2. Longitudinal DBP data from antenatal booking BP to 3-4 years postpartum demonstrating the long-term benefit of self-management on blood pressure control following a hypertensive pregnancy



*BP at 3-4 years is 24hr overall average diastolic BP measured by ABPM

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