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Blood pressure measurement in pregnancy

We refer to the article on blood pressure measurement in obese pregnant women in the August edition of IJOA.[1] On page 68, the statement is made that four devices are currently validated for blood pressure measurement in pre-eclampsia. However, the article in the Journal of Hypertension to which the authors refer, also includes as validated the Microlife 3AS1-2 device, which appears to have been omitted from reference in the article.

The Microlife 3AS1-2 device (now known as the Cradle VSA device, with an inbuilt traffic light system and shock detection) has been validated in accordance with the British Hypertension Society protocol requirements and achieved the International Organisation for Standardization standard for mean difference ± SD (≤ 5 ± 8 mmHg) in pregnancy, including in pre-eclampsia[1]. Thus, it can be recommended for use in pregnancy and may be particularly useful for accurate detection of blood pressure in high-risk women with pre-eclampsia, where impaired accuracy of other automated devices at higher blood pressures mean that they may under estimate the true blood pressure.[2] It can be used with both small and large cuff sizes.

In addition, the Cradle VSA has been specifically designed for use in low-resource settings, where healthcare workers have limited access to accurate vital signs measuring devices that are suitable for their environment. Over 20,000 such devices have been rolled out in over 20 low- and middle-income countries recently. The device is low cost, easy to use, has low power requirements and can be charged using a standard mobile phone charger. It is also robust and remains very accurate even at extremes of temperature and humidity.[2] Its integrated traffic light early warning system can identify women who are hypertensive and at increased risk of complications, and who thus require referral and transfer to higher level care.[3]

The device's validation in pregnant women with low blood pressure means that it may also improve the detection of shock, secondary to obstetric haemorrhage or sepsis, particularly in a low-resource setting.[4]

The Cradle VSA device is the cheapest and most accurate blood pressure device available for use in pregnancy and has been recognised as one of the top thirty high impact innovations in global health.[5]

A discussion regarding blood pressure measurement in pregnant women would, therefore, not be complete without mention of this innovative device that has the potential to dramatically improve both maternal and neonatal outcomes around the world.

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