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Validation of the A&D BP UA-651 device with a wide-range cuff for home blood pressure measurement according to the European Society of Hypertension International Protocol revision 2010.

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The aim of this study was to determine the accuracy of the A&D BP UA-651 device coupled to a wide-range cuff for home blood pressure (BP) measurement according to the International Protocol of the European Society of Hypertension. The device was evaluated in 33 patients. The mean age of the patients was 56.5 ± 15.1 years. The mean systolic BP was 144.3 ± 23.8 mmHg (range 88 : 196), the mean diastolic BP was 87.5 ± 15.8 mmHg (range 38 : 132), and the mean arm circumference was 29.0 ± 3.4 cm (range 22 : 36). The protocol requirements were followed precisely. The device passed all requirements, fulfilling the standards of the protocol. On average, the device overestimated the systolic BP by 0.7 ± 3.4 mmHg and underestimated the diastolic BP by 0.8 ± 3.6 mmHg. The measurement error was unrelated to the patient's arm circumference. These data show that the A&D BP UA-651 device coupled to a wide-range cuff fulfilled the requirements for validation by the International Protocol over a wide range of arm circumferences and can be recommended for clinical use in the adult population.

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