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Validation of the A&D BP UB-543 wrist device 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 UB-543 wrist device for home blood pressure (BP) measurement according to the International Protocol of the European Society of Hypertension. The A&D BP UB-543 monitor is provided with a correct position guidance (CPG) indicator that ensures the correct placement of the wrist at the heart level. Device evaluation was carried out in 33 patients with the CPG indicator on. The mean age of the patients was 53.1 ± 16.4 years, the mean systolic BP was 141.8 ± 25.1 mmHg (range 84 : 196), the mean diastolic BP was 88.2 ± 14.5 mmHg (range 34 : 132), the mean arm circumference was 29.0 ± 3.6 cm (range 21 : 38), and the mean wrist circumference was 17.5 ± 1.4 cm (range 15 : 20). 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 1.1 ± 2.9 mmHg and underestimated diastolic BP by 0.1 ± 3.0 mmHg. These data show that the A&D BP UB-543 wrist device used correctly with the CPG indicator on met the requirements for validation by the International Protocol and can be recommended for clinical use in the adult population.

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