Simulator-based assessment of ankle arterial systolic blood pressure measurement skills

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Résumé en anglais	OBJECTIVE: Learning basic vascular examination is a complex process. Very few studies have focused on the ability to measure the arterial systolic blood pressure at the ankle (ASBPa). The aim of this study was to objectively assess the effects of a 1-h practical educational intervention on the ability to measure ASBPa among medical students. METHODS: A total of 27 medical students were prospectively recruited. Two evaluation sessions of ASBPa measurement skills were conducted, before (T1) and after a 1-h practical lesson (T2). To assess the learning effect associated to the simulator-based evaluation, a control group composed by nonmedical students, not involved in the practical lesson, was also tested. Objective assessments of ASBPa measurements were performed by an instrumented leg prototype. RESULTS: There was a nonsignificant decreasing trend measurement time after practical lesson. The average pressure determination error (ΔP) was significantly reduced: ΔPT1: 10.5 ± 13.8 mmHg vs. ΔPT2: 5.7 ± 6.0 mmHg (P = 0.002). The mean deflation rate (DR) of the cuff was significantly decreased: DRT1: 12.9 ± 9.2 mmHg/s vs. DRT2: 8.7 ± 4.6 mmHg/s (P = 0.001). The control group did not show significant changes. CONCLUSION: A 1-h practical learning could improve some parameters of the ASBPa measurement among medical students, but was not sufficient to allow the measured technical factors to reach established guidelines.
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