

البحث الخامس بحث مقبول جماعي

عنوان البحث :

نتائج مشروع معايرة أجهزة قياس الضغط الزئبقية في مصر

Results of a project to calibrate mercury sphygmomanometer blood pressure-measuring devices in Egypt

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Hypertension (HTN) is a common health problem and a major cardiovascular risk factor. Accurate measurement of blood pressure (BP) is mandatory for proper diagnosis and follow-up. The aim of this study was to evaluate the accuracy of mercury sphygmomanometer BP-measuring devices in public hospitals in Cairo, Egypt. Fifty public hospitals were included, and 10% of all mercury sphygmomanometer devices in each hospital were tested. Assessment included physical condition (e.g., mercury status, lid of the device, state of the rubber tubes), leakage rate, and calibration accuracy (as compared with a reference device). Devices were approved as accurate when they could successfully pass all three assessment tests. The total number of sphygmomanometer devices was 465. The overall pass rate was 1.3% (six devices). Twenty-five (5.2%) devices passed all of the physical tests, 50 (10.8%) passed the leakage test, and 50 (16.5%) passed the calibration accuracy test. There were 162 (34.8%) devices that showed a high leakage rate (>80 mmHg) and thus were not tested for calibration accuracy. In conclusion, most of the mercury sphygmomanometer devices in hospitals are neglected and not checked regularly for any errors. A plan should be made to gradually replace those failed devices with new, validated, and well-calibrated devices, preferably devices that do not contain mercury.

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