

this pilot study is that there is a clear need for an education programme in our region to provide information to GPs on up to date BP monitoring technology.

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DYNAMICS OF BLOOD PRESSURE ON SPIRONOLACTONE TREATMENT IN PATIENTS WITH RESISTANT HYPERTENSION AND RHEUMATOID ARTHRITIS DEPENDING ON THE ACTIVITY

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Objective: to determine the features of the dynamics of blood pressure (BP) in patients with resistant hypertension (RH) and rheumatoid arthritis (RA) depending on the decrease in laboratory activity of RA.

Design and methods: 60 patients with RH in combination with RA were included in the study. Outpatient BP measurement and ambulatory blood pressure monitoring (ABPM) were performed. Patients after 12 months of treatment with spironolactone were divided into two groups: A - reached the target value of low laboratory activity of RA - CRP < 5.0 mmol / l (n = 27), B - did not reach (n = 33). The average age of patients in group A was 62.7 ± 8.4 years (81.6% women), group B - 63.1 ± 7.4 years (78.4% women). RA activity was determined by the disease activity index (DAS 28-CRP) and was 5.7 ± 2.3 in group A, 5.8 ± 1.8 in group B before the treatment.

Results: After reduction of RA activity, the improvement of BP control is more pronounced: in group A the levels of office systolic BP (SBP) were reduced by 15.0 mm Hg, diastolic (DBP) by 7.5 mm Hg and pulse (PBP) by 10.0 mm Hg (all p < 0.01) in comparison to reduction of SBP in group B by 10.0 mm Hg (p < 0.05). After ABPM performing identical results were obtained: in group A the average day-night (dn), day (d) and night (n) SBP, DBP and PBP were decreased (average SBPdn by 13.7 mm Hg, DBPdn by 9.7 mm Hg, PBPdn by 7.7 mm Hg; average SBPd by 10.5 mm Hg, DBPd by 5.8 mm Hg, PBPd by 6.6 mm Hg; average SBPn by 19.2 mm Hg, DBPn by 7.0 mm Hg, PBPn by 9.1 mm Hg (all p < 0.05)) against a less significant decrease in group B. Nocturnal SBP and DBP decrease were increased by 8.2% (from 4.5 (-2.8–13.8)% to 12.7 (7.4–25.4)%), p < 0.05) and 8.8% (9.9 (4.2–18.7)% to 18.7 (10.4–25.4)%), p < 0.01) with the level of CRP < 5.0 mmol / l after 12 months of treatment.

Conclusions: In patients with RA in combination with RH administration of spironolactone to existing triple therapy enhances the antihypertensive effect of drugs, which is manifested by more frequent achievement of target blood pressure levels.

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COMPARISON BETWEEN CUFF-BASED AND INVASIVE SYSTOLIC BLOOD PRESSURE AMPLIFICATION

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Objective: Accurate measurement of central blood pressure (BP) using upper arm cuff-based methods is associated with several factors, including determining the level of systolic BP (SBP) amplification. This study aimed to determine the agreement between cuff-based and invasively measured SBP amplification.

Methods: Patients undergoing coronary angiography had invasive SBP amplification (brachial SBP minus central SBP) measured simultaneously with cuff-based SBP amplification using a commercially available central BP device (device 1: Sphygmocor Xcel; n = 171, 70% men, 60 ± 10 years) and a now superseded model of a central BP device (device 2: Uscom BP+; n = 52, 83% men, 62 ± 10 years).

Results: Mean difference (±2SD, limits of agreement) between cuff-based and invasive SBP amplification was 4 mmHg (-12, + 20 mmHg, p < 0.001) for device 1 and -2 mmHg (-14, + 10 mmHg, p = 0.10) for device 2. Both devices systematically overestimated SBP amplification at lower levels and underestimated at higher levels of invasive SBP amplification, but with stronger bias for device 1 (r = -0.68 vs. r = -0.52; Z = 2.72; p = 0.008). Concordance of cuff-based and invasive SBP amplification across quartiles of invasive SBP amplification was low, particularly in the lowest and highest quartiles. The root mean square errors from regression between cuff-based central SBP and brachial SBP were significantly lower (indicating less variability) than from invasive regression models (p < 0.001).

Conclusions: Irrespective of the difference from invasive measurements, cuff-based estimates of SBP amplification showed evidence of proportional systematic bias and had less individual variability. These observations could provide insights on how to improve the performance of cuff-based central BP.