blood pressure, the maximum systolic and diastolic blood pressure, systolic blood pressure at night, night mean arterial pressure, urea and uric acid.

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0300
Relationship between serum resistin, carotid intima-media thickness and urinary albumin excretion rate in patients with primary hypertension

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Objective: To examine the relationship between serum resistin, carotid intima-media thickness and urinary albumin excretion rate in patients with primary hypertension. **Methods:** 100 patients newly diagnosed with primary hypertension and 30 healthy persons as the control were enrolled into this study. ELISA was used to test the concentration of serum resistin. Carotid intima-media thickness (IMT) was estimated by ultrasound, and urinary albumin excretion rate (UAER) was tested by chemiluminescence. **Results:** With the increase of blood pressure, levels of the homeostasis model assessment—insulin resistance index (HOMA-IR), serum resistin, carotid IMT and UAER increased gradually. Patients were divided into 2 groups by the median of resistin level (9.12 μg/L). Compared with low-level resistin group, patients in high-level resistin group had higher carotid IMT (0.92 mm vs 0.63 mm, $P<0.01$) and UAER (100.7 μg/min vs 41.8 μg/min, $P<0.01$). Resistin positively correlated with systolic blood pressure (SBP), diastolic blood pressure (DBP), HOMA-IR, low-density lipoprotein cholesterol, triglycerides, high-sensitivity C-reactive protein (hs-CRP), interleukin-6 (IL-6), carotid IMT and UAER ($P<0.01$). Resistin still positively correlated with carotid IMT and UAER with respective partial correlation coefficients 0.840 and 0.794 (both $P<0.01$) after adjustment for age, glucose, HOMA-IR, lipids, hs-CRP, IL-6, body mass index, SBP and DBP. Multiple linear regression analysis indicated that UAER, SBP and carotid IMT were independent factors associated with serum resistin concentration ($P<0.01$). **Conclusions:** Patients with primary hypertension had increased expressions of resistin, carotid IMT and UAER. Resistin positively correlated with carotid IMT and UAER independently. The underlying mechanisms of resistin in the development of primary hypertension warrant further study.

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Clinical Trials

0020
The study on circadian rhythm of cardiac autonomic nervous activity and the intervention with enalapril in stage I to II essential hypertensives

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Objectives: To study the circadian rhythm of cardiac autonomic nervous activity (ANA) in essential hypertension and observe the effect of treatment with enalapril on it. **Methods:** 24 h heart rate power spectral analysis (HRPSA) and 3D HRPS graph were performed in 30 pre-and-post treatment patients with stage I to II essential hypertension (EH I–II). 153 patients with EH I–II, 40 patients with EH III and 30 healthy normotensives. **Results:** (1) In EH I–II group, TP, VLF, LF and HF were higher apparently ($P<0.05$) at late night (3–4 am) than those of normotensive group, whereas LF/HF had no difference ($P>0.05$) between two groups in every interval. (2) Enalapril reduced TP ($P<0.05$), VLF ($P<0.05$), LF ($P>0.05$), HF ($P<0.05$) with 25.2%, 27.1%, 16.8%, and 25.0%, respectively, at late night (3–4 am) but no effect during daytime. (3) 3D HRPS graphs were characteristic for different patients. **Conclusions:** (1) The increasing of sympathetic and parasympathetic activities at late night was present in patients with EH I–II, suggested that the ANA was enhanced compensatively in early stage of EH, but the ANA activity of EH III was decreased. (2) Enalapril can decrease the peak values of ANA at night after 4 weeks treatment. (3) HRPS is useful to research, evaluate ANA, especially the 3D HRPS graph.

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0037
Amlodipine plus telmisartan or amiloride for hypertension in moderate and high-risk patients: Focus on effects on metabolic profiles

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Objectives: In the present study was to evaluate the short-term effect of amlodipine pius telmisartan or amiloride on reduction of blood pressure in moderate and high-risk patients. Meanwhile, we assessed the effects of these drug combinations on metabolic profiles in these patients. **Methods:** In this randomized, blinded trial, 106 hypertensive patients met the inclusion criteria and were enrolled. Patients were randomly assigned to amlodipine 2.5 mg plus telmisartan 80 mg group (AML/TEL) or amlodipine 2.5 mg plus amiloride 2.5 mg hydrochlorothiazide 25 mg complex (AML/AMIL-HCTZ); amlodipine 2.5 mg could be added if blood pressure beyond control at 4 weeks. Follow-up was 24 weeks. Primary efficacy parameter was reduction of blood pressure at 24 weeks. Physical and laboratory characteristics and side effects were recorded. Physical and laboratory characteristics and side effects were recorded. **Results:** All the baseline characteristics are comparable in two groups. Both antihypertensive regimens produced statistically significant reductions from baseline in blood pressure (ΔSBPs 24.3 ± 15.8 vs 26.8 ± 13.4, $P>0.05$) (ΔDBPs 15.2 ± 9.2 vs15.7 ± 9.4, $P>0.05$) that were equivalent at 24 weeks treatment. While the patients complicated with impaired glucose tolerance (IGTs) and diabetes mellitus (DMs) statistically differences were found between two groups in total cholesterol (3.78 ± 0.73 in AML/TEL vs 5.89 ± 1.02 in AML/AMIL-HCTZ, $P<0.05$) and fasting glucose (6.5 ± 1.6 mmol/L in AML/TEL vs 8.8 ± 1.9 mmol/L in AML/AMIL-HCTZ, $P<0.05$). The reduction of blood pressure (ΔSBPs 22.4 ± 12.6 vs 24.2 ± 14.4, $P>0.05$; ΔDBPs 13.5 ± 6.2 vs 13.7 ± 7.4, $P>0.05$) and adverse effects (9% vs 8.3%) were similar between two regimens in the IGTs and DMs. **Conclusion:** Amlodipine-based antihypertensive combination strategies achieved satisfactory blood pressure control in hypertensive patients with moderate or high cardiovascular risk. Due to the metabolic profile was unfavorable towards the AML/AMIL-HCTZ group in the IGTs and DMs patients. Initial antihypertensive treatment with amlodipine plus telmisartan should be considered in preference to amlodipine 2.5 mg plus amiloride 2.5 mg hydrochlorothiazide 25 mg complex to control risks factors at greater extent.

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