



# Intervention for prehypertension and its cardiovascular risk factors in Inner Mongolia

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**ABSTRACT.** Blood pressure levels were evaluated among prehypertension patients with associated cardiovascular risk factors to determine the effect of different interventions with respect to new endpoint events. A total of 1112 patients were equally and randomly divided into control, lifestyle, drug, and lifestyle + drug groups, and were followed-up for 12 months. We collected the age, height, weight, blood pressure, heart rate, blood lipid levels, blood glucose levels, and other clinical data from all subjects at the baseline and at the end of the follow-up period. The average systolic blood pressure (SBP) and diastolic blood pressure (DBP) in the intervention groups were significantly reduced after the intervention (lifestyle + drug > drug > lifestyle). SBP and DBP were higher in the control group than before intervention ( $P < 0.05$ ). Age, gender, heart rate, triglyceride (TG) levels, body mass index (BMI), alcohol consumption, and family history were the major factors affecting blood pressure. Increased BMI, TG, high-sensitivity C-reactive protein, alcohol consumption, family history, SBP, and DBP were major risk factors of hypertension. At the end of the follow-up period, there were 67 cases of hypertension, 32 cases of diabetes, and 12 cases of the endpoint events. Hypertension and diabetes events were reduced

in the intervention groups relative to the control group ( $P < 0.05$ ). The number of cases with incident cardiovascular endpoints did not differ among the three intervention groups ( $P > 0.05$ ). Therefore, hypertension and related cardiovascular events can be controlled with different interventions.

**Key words:** Normal high blood pressure; Risk factors; Intervention studies