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**THE EFFECTS OF LONG-TERM HIGH-SALT DIET ON BLOOD PRESSURE AND KIDNEY IN WISTAR RATS AND THE INTERVENTION OF TELMISARTAN**

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**Objectives** To investigate the effects of long-term high-salt diet on blood pressure and kidney and the intervention of telmisartan.

**Methods** Wistar rats were randomly divided into three groups: Control group (NS group: given 0.5% NaCl), High-salt group (given 8% NaCl), and Intervention group (GY group: given 8% NaCl+telmisartan). Systolic blood pressure was assessed by the tail-cuff artery pressure. The urine was collected to measure the concentration of Na<sup>+</sup>, K<sup>+</sup>, microalbumin, total protein, and creatinine. At 24 weeks, the renal hypertrophy index was calculated. HE, Masson staining were used to observe the kidney morphology.

**Results** Compared with NS group, systolic blood pressure was significantly increased and continued until the end of the experiment in one part of rats fed high-salt diet, whereas the other part of rats fed high-salt diet developed transient increase in blood pressure only from 8 weeks to 10 weeks of the experiment. So high-salt group rats were finally divided into High-salt hypertension group (HH group) and High-salt normal blood pressure group (HN group). In high-salt group rats, the renal hypertrophy index, microalbumin, total protein, and the ratio of Na<sup>+</sup>/K<sup>+</sup> were increased ( $p<0.01$ ), creatinine clearance rate was decreased ( $p<0.01$ ), but the renal damage in HN group was lighter than that in HH group. In GY group, systolic blood pressure was decreased, and the content of microalbumin, and total protein was reduced ( $p<0.01$ ), renal damage was ameliorated, but the renal hypertrophy index, creatinine clearance, and the ratio of Na<sup>+</sup>/K<sup>+</sup> did not change ( $p>0.05$ ).

**Conclusions** Long-term high-salt diet may induce high blood pressure in part of the Wistar rats and cause renal damage independent of high blood pressure. Telmisartan can prevent high blood pressure and renal damage induced by high-salt diet in Wistar rats.