water), telmisartan group given 6 mg/kg telmisartan), pyridoxamine group (given 200 mg/kg pyridoxamine) and TP group (given 6 mg/kg telmisartan and 200 mg/kg pyridoxamine), continued for 16 weeks. The normal control group included 13 WKY rats received gastric lavage with distilled water. SBP in rat tail artery was measured before and after the intervention. The levels of 24-h urinary albumin and the serum levels of AGEs were measured by nephelometry and ELISA after the intervention. Morphological changes in renal tissues were observed under light (H&E or Masson's trichrome) and transmission electron microscopy. Expression of TGF-β in the renal cortex was investigated by Western Blotting.

Results The levels of 24-h urinary albumin, the serum levels of AGEs and the expression of TGF-β in the renal cortex was significantly increased in the HC group ($p<0.01$), and staining showed hardening of the glomeruli, and most of capillaries showed lumen occlusion and glomerular-capsule adhesion. The glomerular mesangial matrix was increased significantly in HC group. The levels of 24-h urinary albumin, the serum levels of AGEs and the expression of TGF-β in the renal cortex was significantly reduced in T, P and TP groups compared to that in the HC group ($p<0.01$), and those structural damages were also alleviated. The SBP in T and TP group were significantly lower than that of P group ($p<0.01$). The serum levels of AGEs in P and TP group were significantly lower than that of T group ($p<0.05$).

Conclusions Early renal damages were alleviated in intervention groups. Pyridoxamine and telmisartan can reduce the levels of urinary albumin in SHRs, and alleviate the structural damages. Those reno-protections of pyridoxamine may result from the reduction of AGEs.

GW23-e1602

THE EFFECTS OF PYRIDOXAMINE AND TELMISARTAN ON THE STRUCTURE AND FUNCTION OF KIDNEYS IN SPONTANEOUSLY HYPERTENSIVE RATS

doi:10.1136/heartjnl-2012-302920a.178

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Objectives Advanced glycation end-products and the receptors are involved in the pathophysiology of hypertension and promote the progression of the end-organ damage. The aim of this study was to investigate the effects of pyridoxamine and telmisartan on the structure and function of kidneys in spontaneously hypertensive rats.

Methods SHRs (male, 20 weeks of age) were randomly divided into four groups (n=12): hypertension control group (given distilled