Wei Xiao-jun, Liao Wei, Xie Dong-yang, Zhon Yi-ming, Xie Dong-ming, Wei Xiao-jun.
*Department of Cardiology, The First Affiliated Hospital of Gannan Medical College,
GanZhou, 341000, China*

Objectives To investigate the correlation of carotid atherosclerosis and serum high sensitivity C-reactive protein levels in elderly hypertensive patients

Methods 102 cases of elderly patients with hypertension were selected according to the WHO/ISH hypertension diagnostic criteria. Blood was taken for quantitative detection of serum hs-CRP in the early morning and carotid ultrasound was done on the same day. Ultrasound scanning began from the beginning of the carotid artery, followed by detection of bilateral common carotid artery, carotid bifurcation and internal carotid artery. The blood vessel wall, blood vessel diameter, medial thickness (MT), and atherosclerotic plaque were observed by two-dimensional image. The MT would be defined as thickening of the carotid intima if the thickness was greater than or equal to 0.9 mm and less than 1.3 mm. The MT would be defined as the plaque if the thickness was greater than or equal to 1.3 mm. Media thickness and (or) plaque formation in the carotid artery were determined to have carotid atherosclerosis.

Results After testing, the normal group, the thickening group and the plaque group of 102 patients were accordingly 20 cases, 19 cases and 63 cases. Serum hs-CRP levels were (2.92 ± 3.12) mg/l, (3.89 ± 2.43) mg/l, and (5.79 ± 4.71) mg/l accordingly in each group. The average level of serum hs-CRP in 82 cases of carotid artery atherosclerosis (thickening group and plaque group) was significantly higher than that in 20 cases without carotid atherosclerosis (5.76 ± 3.24 vs 3.58 ± 2.51 mg/l, $p < 0.05$).

Conclusions Serum hs-CRP levels in hypertensive patients with carotid atherosclerosis were significantly higher than those without carotid artery lesions, suggesting that serum hs-CRP levels have a high correlation with carotid atherosclerosis in elderly hypertensive patients and the inflammatory response may play a crucial role in the process of carotid artery atherosclerotic lesion development.