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CALCIUM ANTAGONIST COMBINED WITH STATIN THERAPY ON PLASMA INFLAMMATORY MEDIATORS IN PATIENTS WITH HYPERTENSION AND CAROTID ATHEROSCLEROSIS

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Wang Hongyi, Jiang Juan, Yang Fan, Lu Xining, Sun Ningling. *Heart Center, People's Hospital, Peking University*

Objectives To investigate the effect of calcium antagonists (CCB) and statins on carotid plaques and plasma inflammatory mediators, so as to learn the possible mechanism of their anti-atherogenic effect.

Methods This is a cross-sectional study. Laboratory tests and carotid ultrasound examination were performed in patients with essential hypertension. All patients were divided into three groups, who were treated with CCB or statins monotherapy or CCB and statins combination therapy respectively. Laboratory parameters included plasma low-density lipoprotein cholesterol (LDL-C), high density lipoprotein cholesterol (HDL-C), high-sensitivity C-reactive protein (hsCRP), the medulla metalloproteinase 9 (MMP9) and the lipoprotein-associated phospholipase A2 (Lp-PLA₂). Correlation analysis was performed between the three groups.

Results Baseline conditions Total 150 patients with essential hypertension were enrolled in, among them 78 (52.0%) were male and

72 (48.0%) were female. Thirty-nine patients complicated with diabetes mellitus, accounting for 26.0%. Thirty-six patients complicated with hyperlipidaemia, accounting for 16.0%. The mean age was 59.06 years and the mean blood pressure was 140.21/84.73 mm Hg.

Comparison Analysis of Plasma Lipids and Inflammatory Parameters

Level Compared with patients who were not treated with statins, patients treated with statins had lower total cholesterol and LDL-C levels. The plasma levels of Lp-PLA₂, MMP9 and hsCRP were similar in patients treated with different drugs, the difference was not statistically significant.

Correlation Analysis between Inflammatory Status and Carotid

Atherosclerosis Pearson correlation analysis showed that Lp-PLA₂ content was linearly correlated with hsCRP levels, the correlation coefficient was 0.282, $p=0.001$. But MMP9 content was not correlated with hsCRP levels, the correlation coefficient was 0.107, $p=0.213$. Compared with patients without carotid plaques, patients with soft carotid plaques had higher plasma content of hsCRP and Lp-PLA₂, the difference was statistically significant showed by ANOVA analysis. MMP9 content was relatively lower in patients with soft carotid plaque, but the difference was not statistically significant.

Conclusions

1. Plasma LP- PLA₂ content, which was positively correlated with plasma hsCRP level, can reflect the body's inflammatory state better than that of MMP9.
2. Patients with soft carotid plaques had higher plasma level of LP- PLA₂, which suggested that the LP-PLA₂ level can reflect the stability of plaques.
3. The difference of inflammatory parameters in different groups was not statistically significant.