



## Relationship between carotid artery atherosclerosis and sulfatide in hypertensive patients

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**ABSTRACT.** Hypertension is a major traditional risk factor for atherosclerosis, and carotid artery intima-media thickness (IMT) is considered to be an important marker of atherosclerosis. Sulfatides have been shown to play a role in atherogenesis and vascular inflammation, resulting in atherosclerosis. This study aimed to assess the association between serum sulfatide and carotid artery IMT among hypertensive patients. We chose 60 hypertensive patients and 30 matched healthy controls. All subjects had medical examinations at Hebei General Hospital between March 2011 and March 2012. Measurements and other factors compared included serum sulfatide level, carotid artery IMT, and conventional cardiovascular risk factors. Hypertensive patients had higher BMIs ( $24.4 \pm 7.6$  to  $23.1 \pm 3.1$  kg/m<sup>2</sup>), total cholesterol levels ( $5.5 \pm 0.6$  to  $5.0 \pm 1.1$  mM), serum sulfatide levels ( $3.5 \pm 3.9$  to  $8.3 \pm 2.7$  μM), and carotid artery IMTs ( $1.06 \pm 0.15$  to  $0.79 \pm 0.07$  mm) (all  $P < 0.05$ )

than control patients. Furthermore, the serum sulfatide level positively correlated with carotid IMT in the hypertensive patients ( $r = 0.39$ ,  $P = 0.002$ ). Multiple linear regression analysis showed serum sulfatide was an independent risk factor affecting IMT ( $P = 0.04$ ). These results suggest that serum sulfatide is more strongly associated with carotid artery IMT than other traditional risk factors in hypertensive patients.

**Key words:** Carotid artery intima-media thickness; Serum sulfatide; Hypertension.