



## Is there any link between homocysteine and atherosclerosis?

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I have read with interest the paper by Han, *et al.*<sup>[1]</sup> reporting that homocysteine (Hcy) is an independent risk factor for non-culprit coronary lesions progression after 12 months of follow-up in elderly patients who has undergone percutaneous coronary stenting. Hcy-mediated increased lipid peroxidation and generation of free radicals results in inflammation and endothelial dysfunction, which triggers atherosclerotic process. Coronary artery disease is also associated with higher levels of Hcy.<sup>[2]</sup>

Hcy is formed in the body from methionin. Methionin is metabolised via re-methylation and transsulphuration. These processes depend on vitamins B12, B6 and folic acid.<sup>[3]</sup> The major determinants of plasma homocysteine level are B vitamins and folate intake and genetic factors.<sup>[3]</sup> Plasma Hcy levels are negatively correlated with vitamin B12, folic acid and creatinine levels. Thus, reporting of these parameters in elderly population would be appropriate in this particular study.

Conventional coronary angiography only demonstrates plaque that encroaches on the lumen. Due to shortcomings of conventional coronary angiography, intravascular imag-

ing provides additional anatomic information regarding vessel wall changes in atherosclerosis. Intravascular ultrasound (IVUS) allows the direct visualization of the arterial wall and atherosclerosis.<sup>[4]</sup> IVUS would be useful in terms of evaluating the progression of atherosclerotic process more accurately.

### References

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