Letters to the Editor

Evidence for association between paraoxonase-1 activity and diseases

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To the Editor,

We read with great interest the article by Karsen et al [1] about association of paraoxonase activity and atherosclerosis in patients with chronic hepatitis B.

They found lower HDL levels, serum paraoxonase-1 (PON1), arylesterase activities, plasma free sulfhydryl groups and total antioxidant capacity, and higher lipid hydroperoxide, total oxidant status, and oxidative stress index in chronic hepatitis B patients. They concluded according to these findings that reduced paraoxonase-1 and arylesterase activities could contribute to the accelerated development of atherosclerosis in patients with chronic hepatitis B.

Some experimental evidence suggests that a decrease in serum PON1 activity may occur as part of an inflammatory response. Chronic decrease in PON1 activity increase susceptibility to atherosclerosis but that more acute declines due to some intercurrent acute inflammatory condition could exacerbate LDL oxidation [2].

Low serum PON1 activity independent of genotype has been reported with diseases, which are known to be associated with coronary heart disease (CHD), such as diabetes mellitus, hypercholesterolemia and renal failure [3]. When PON1 activity is measured directly in patients with CHD, it is approximately half that of disease-free control subjects[4]. Angiographically documented coronary artery disease PON-1 and HDL-Cholesterol were significantly lower and lipid peroxides and triglycerides were higher in coronary artery disease patients than in normal coronary and control subjects[5].

And also, lipid-lowering drugs and fibric acid derivatives have been reported to raise serum PON1 activity[6].

In conclusion; if details of patients such as history of diseases (coronary artery disease, renal failure, diabetes, hypertension), medication (lipid-lowering drugs, fibric acid derivatives), an inflammatory status and smoking habits were given, this study could have been more valuable.

References

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Dr. Hasan Karsen replies

Dear Editor,
We have not reported but, our patients did not have any history of diseases such as coronary artery disease, renal failure, diabetes mellitus, hypertension and they had not received any drug for medication. And we have reported that patients had no infection with other hepatitis viruses, or a history of autoimmune disease.[1]

Best regards,

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Reference

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