Author's Reply

Coronary Spasm and hs-CRP

We thank Dr Oda and Dr Watanabe for their comments regarding our paper. They state that we recommended “the C-reactive protein (CRP) cutoff point of 2 mg/L as a risk marker for coronary spasm in patients with normal coronary angiograms” and they recommend that we should study the optimal CRP cutoff point as a risk factor for coronary spasm by a receiver-operating characteristics (ROC) curve analysis, suggesting that the optimal cutoff point may be between 0.5 mg/L and 1.2 mg/L because the median CRP value of the non-spasm group and that of the spasm group was 0.5 mg/L and 1.2 mg/L, respectively, in our study. We deeply appreciate their advice. We are afraid, however, that they might have somewhat misunderstood the essential point of our paper. The object of our study was to determine whether coronary spasm was associated with chronic low-grade inflammation, as indicated by the elevated level of high-sensitivity CRP (hs-CRP), and the conclusion was that minor elevations of the serum CRP level are significantly associated with coronary spasm, suggesting that chronic low-grade inflammation may be involved in the pathogenesis of coronary spasm.¹ Accordingly, our study was not designed to determine the cutoff point of hs-CRP as a risk marker of coronary spasm, as they suggest. We admit that demonstration of a statistically significant association of

hs-CRP with coronary spasm is not enough. The ROC curve and its associated summary index, the area under the curve, have recently found an increasingly popular place in medical diagnosis and population screening surveys.² Nevertheless, we think that it might be premature to apply ROC curve analysis to hs-CRP for diagnosing or predicting coronary spasm, because CRP is a highly non-specific marker of inflammation. Moreover, the value of hs-CRP may differ according to age, sex, study population, laboratory methodology etc.

References

1. Itoh T, Mizuno Y, Harada E, Yoshimura M, Ogawa H, Yasue H. Coronary spasm is associated with chronic low-grade inflammation. *Circ J* 2007; **71**: 1074–1078.
2. Oda E, Oohara K, Abe A, Veeraveedu PT, Watanabe K, Kato K, et al. The optimal cut-off point of C-reactive protein as an optional component of metabolic syndrome in Japan. *Circ J* 2006; **70**: 384–388.

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