
We thank Dr Schindhelm for his constructive comments and interest in our study.1 In a further analysis using a multiple linear regression model where plaque erosion and smoking status were entered as independent variables and the myeloperoxidase (MPO) level was entered as the dependent variable, with the assumptions of normality of residuals, absence of heteroscedasticity, and presence of linearity all met, plaque erosion (coefficient 1195.2, 95% confidence interval [46.1 to 1296.3]; \( P = 0.001 \)) and smoking status (coefficient 671.2, 95% confidence interval [682.7 to 1707.8]; \( P = 0.037 \)) were found to be independent predictors of MPO levels. Similar results were obtained using an analysis of covariance (ie, by assessing whether a significant difference in MPO levels between plaque erosion and plaque rupture remains after adjusting for smoking status [plaque erosion, \( P = 0.0001 \); smoking status, \( P = 0.037 \)].)

Dr Schindhelm’s second comment addresses the experience that MPO concentrations in EDTA-plasma are lower than those in serum, where the latter suggests uncontrolled ex vivo release of MPO from leukocytes during and after sample collection.2 A more recent study by Wendland et al,3 however, reports the opposite findings, concluding that the collection of MPO in tubes containing EDTA “alters in an expressive way the results.” In our study, we used serum collection tubes as they had been used in a previous large observational study enrolling patients with acute coronary syndromes where MPO levels were found to predict the clinical outcome.4 Similar studies have also reported an association between serum MPO levels and myocardial reperfusion after thrombolysis5 and systemic inflammation after a primary percutaneous coronary intervention,6 thus indicating that MPO measured in serum is clinically meaningful. Finally, the findings in our clinical study are consistent with those in our postmortem tissues from sudden coronary deaths that showed a higher density of MPO-positive cells in thrombi overlying eroded lesions relative to plaque rupture.

Disclosures

None.

References


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Response to Letter Regarding Article, "High Levels of Systemic Myeloperoxidase Are Associated With Coronary Plaque Erosion in Patients With Acute Coronary Syndromes: A Clinicopathological Study"

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