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THE LONG-TERM PROGNOSTIC VALUE OF MYELOPEROXIDASE ON ACUTE CORONARY SYNDROME—A META-ANALYSIS

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Objective Recent studies have shown that myeloperoxidase (MPO) is involved in the pathogenesis of acute coronary syndrome (ACS). However, there were different results in various studies as to whether MPO could predict the long-term adverse outcomes in patients with ACS. The purpose of this article was to perform a meta-analysis in order to compare the long-term prognosis of ACS patients with high MPO levels and low MPO levels.

Methods The literature was scanned by formal searches of electronic databases (PubMed, EMBASE, Medline, OVID and web of knowledge) from inception to July 2010. Studies grouped by MPO level and followed up for at least 30 days were included in this article. The authors decided to use the median MPO level in the studies included as a cut-off to divide the patients into two groups (high/low MPO group). Exclusion criteria were: (1) ongoing studies and (2) irretrievable data. Two investigators independently assessed all titles and abstracts for eligibility, with divergences resolved by consensus. The authors chose Mantel-Haenszel as statistical method, random effects as analysis model, risk ratio (RR) as effect measurement for dichotomous variables. Formal test for publication bias had been carried out using a funnel plot.

Results A total of eight clinical trials were included in this meta-analysis, involving 3909 patients. The mean follow-up duration was 2 years. The high MPO level group showed a worse outcome than the low group (14.3% vs 10.4%, risk ratio (RR) 1.83, 95% CI 1.41 to 2.39, p<0.00001).

Conclusion ACS patients with high MPO level had a poor long-term prognosis.