What about pleiotropic modifiers of the pre-procedural pro-inflammatory and pro-oxidant milieu in patients undergoing drug eluting stent implantation?

Dear Editor,

In the July 2015 issue of your journal, Tanindi et al. presented a study entitled ‘Do pre-procedural laboratory parameters predict drug-eluting stent restenosis?’, in which the authors investigated the predictors of ISR after implantation of second generation drug eluting stents (DES) among patients with stable angina pectoris. I congratulate the authors on their work, and would also like to draw attention to the following:

1. The exact pathophysiological mechanisms of coronary in-stent restenosis (ISR) have not yet been fully elucidated, but are thought to consist of inflammation, proliferation, and extracellular matrix remodeling. There exist several studies on implementing a risk model including clinical, peri-procedural and biological factors for risk prediction and patient risk stratification. Although the predictive value of several hematological and biochemical markers which exert either direct and/or indirect pro-inflammatory and pro-oxidant effects have been investigated in this study, only diabetes mellitus and post-procedural residual stenosis were found to be independent predictors of ISR. In the literature, diabetes mellitus is known as the strongest clinical risk factor for ISR.

2. Among biological factors, the study serum CRP levels were shown as the significant predictor of ISR after bare metal stent implantation. However, such an association has not been evidenced after DES implantation, which might be due to the inflammation-altering effects of DES.

3. In the study, 66.6% of patients had hypertension, 41.9% diabetes mellitus and 64.4% hyperlipidemia. However, the medications for all those cardiometabolic risk factors (e.g. statins, anti-hypertensives and anti-diabetics), which might alter the pre-procedural pro-inflammatory and pro-oxidant milieu, have not been reported in the paper. Also, due to its well known anti-inflammatory effects, the rate of previous aspirin usage should have been presented. Furthermore, the authors should have highlighted the reasons in accordance with evidence and/or experience for routine 6–12th month control coronary angiography after percutaneous coronary intervention (PCI) in their clinical practice.

In conclusion, pre-PCI medications for cardiometabolic risk factors may alter pro-inflammatory and pro-oxidant milieu which were known as the important risk factors for ISR.

Uğur Canpolat, M.D.
Department of Cardiology, Hacettepe University Faculty of Medicine, Ankara
References


