RELATIONSHIP OF SYNTAX SCORE WITH MARKERS OF VASCULAR INFLAMMATION

Poster Contributions
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Authors: Saurabh Rajpal, Mohammad A. Rana, Elvis Peter, Shivang Shah, Sibile Pardue, Henock Gebregziabher, Pavan Katikaneni, Jai Varma, Nuri Akkus, Chris Kevil, LSUHSC Shreveport, Shreveport, LA, USA

Background: The syntax score (SS) is a novel angiographic scoring system reflective of the severity of coronary atherosclerosis. Higher SS has been shown to be significantly associated with cardiac mortality and major cardiac events. We sought to determine the relationship of the SS with plasma markers of atherosclerosis and vascular inflammation.

Methods: Prospectively 193 patients over the age of 40 presenting for cardiac catheterization or peripheral angiography were enrolled. Of these, 82 patients were found to have > 50% CAD in at least one epicardial coronary vessel. Plasma samples were obtained from the arterial access for measurement of total nitric oxide levels, nitrite, thrombospondin-1 (TSP-1), Interleukin 6 (IL-6) and soluble intercellular adhesion molecule (ICAM). Three experienced interventional cardiologists interpreted coronary angiograms and SS was calculated using the online scoring tool. Pearson and Spearman correlation coefficients were used to evaluate the relationship.

Results: The mean SS was 18.86±12.5. There was a positive correlation between SS and free nitrite levels by Spearman correlation analysis (r=0.245,p=0.026), total NOx levels (r=0.259,p=0.019) and IL6 levels (r=0.233,p=0.035) but no correlation with SS (r=-0.101,p=0.367) and ICAM. There was also no significant relationship between SS (Pearson r=0.115,p=0.303) and TSP1.

Conclusion: As expected, SS correlated with IL-6 levels. An unexpected weak positive correlation of SS was noted with the levels of NOx and nitrites. Non-endothelium dependent nitric oxide pathways or lack of additional diminution in advanced CAD may explain our findings. There was no correlation of SS with ICAM or TSP-1 levels.