CLINICAL AND PROGNOSTIC VALUE OF POST STENTING FFR FOR ASSESSMENT OF ISCHEMIA REDUCTION IN PATIENTS WITH ACUTE CORONARY SYNDROMES

Poster Contributions
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Background: Measuring fractional flow reserve (FFR) in acute coronary syndromes (ACS) is seldom employed given concerns about possible impaired microvascular function. The importance of ischemic reduction assessed by post-stenting FFR (PS-FFR) and its impact on long term outcomes has not been studied in this population.

Methods: Of 538 consecutive patients undergoing PS-FFR following angiographically successful PCI of a functionally significant lesion, 176 patients (33%) had ACS. Clinical and angiographic determinants of ischemia reduction and long term outcomes were recorded.

Results: Of 176 patients with ACS (age 63±10 years, 47% diabetics), 65 patients had NSTEMI and 111 unstable angina. PCI lead to angiographic lesion reduction from 76±13% to 1.2±6% with significant ischemia reduction from baseline FFR 0.63±0.15 to PS-FFR 0.90±0.6 (p<0.0001). PS-FFR identified 23 patients (13%) who had persistent ischemia (<0.80) despite angiographically optimal results. The low FFR prompted a subsequent intervention including post dilation or placement of another stent improving FFR on repeat measurement (0.73±0.06 to 0.85±0.05; P<0.0001). The clinical utility of PS-FFR was similar for patients with NSTEMI and unstable angina. ROC analysis identified a cutoff of 0.86 for PS-FFR for MACE prediction in ACS population at a mean follow up of 2.7±1.4 years.

Conclusion: PS-FFR is a very robust tool in assessing the degree of ischemic reduction in patients with ACS.