

Primary Percutaneous Coronary Intervention and Large Thrombus Burden Lesions: A Questionable Impact of Mesh Covered Stent on the Frequency of No Reflow

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Background:

Mesh Covered Stent [(Mguard) MCS] has been proposed for the prevention of no reflow during primary percutaneous coronary interventions (PPCI) but its efficacy in large thrombus burden lesions is unknown. **Aim:** To investigate the efficacy of the MCS in the prevention of no reflow in STEMI treated with PPCI presenting culprit lesions with large thrombus burden.

Methods:

61 STEMI pts with definite thrombus (TIMI thrombus score ≥ 3) at the culprit lesion who underwent PPCI with bare metal stent [(28 pts) BMS] or MCS (33 pts) were analyzed. End points were: No reflow, coronary embolism, residual thrombus, corrected TIMI frame count, final TIMI flow grade and final TIMI blush grade.

Results:

MCS pts were younger (54 ± 11 vs. 59 ± 13 years, $p=0.04$), with a longer ischemic time (215 ± 138 vs. 144 ± 73 min. $p<0.01$) and a higher prevalence of very larger thrombus (TIMI thrombus score IV-V: 62% vs. 25%, $p<0.01$). Direct stenting (68% vs. 52%), manual aspiration (68% vs. 52%) and IIB/IIIa inhibitors (33% vs. 39%) were similar. MCS patients showed lower rate of no reflow (0% vs. 14%, $p=0.03$) and lower corrected TIMI frame count (10 ± 2.3 vs. 17 ± 10 , $p=0.03$). No differences were seen in final TIMI grade III flow (79% vs. 82%), blush grade III (46% vs. 33%), residual thrombus (9% vs. 17%) and visible coronary emboli (9% vs. 7%). In a multivariate analysis the implantation of MCS was not independently associated with prevention of no reflow (OR [95% CI]= 0.9 (0.7-1.2))

Conclusion:

The mesh covered stent when implanted in lesions containing large thrombus burden in the setting of PPCI it is not associated with an improvement of the angiographic result or a decrease in the rate of no reflow.