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MGUARD MESH-COVERED STENT FOR TREATMENT OF ST-SEGMENT ELEVATION MYOCARDIAL INFARCTION WITH HIGH THROMBUS BURDEN DESPITE MECHANICAL ASPIRATION

i2 Poster Contributions
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Background: The Mguard stent (MGS) is a novel mesh-covered stent designed to prevent thrombus embolization. Although MGS has been shown to be safe and effective in patients (pts) with ST-segment elevation myocardial infarction (STEMI), its use in pts with remaining high thrombus burden (TB) after thrombus aspiration is unknown.

Methods: The present study is a single-center, single-arm, prospective registry of pts with STEMI and high TB after aggressive thrombus aspiration treated with MGS. High TB was defined as TB grade 4-5 according to the TIMI score. Lesions with a side branch≥2mm and pts with cardiogenic shock were not included. The study endpoints were proportion of final TIMI 3 flow, normal myocardial blush and complete ST-segment resolution.

Results: 50 MGS were implanted in 44 pts (age 60±12 years). Thrombus aspiration obtained atherothrombotic material in 35 pts (80%). Aspirated material length was 5.1±0.5 mm. Angiographic endpoints after MGS implantation are shown in Figure 1. Side branch (1.5-2mm) occlusion occurred in 2 cases (4.5%), distal embolization in 3 (6.8%) and transient no-reflow in 3 cases (6.8%). During the follow-up (228±21 days) 1 patient experienced an acute definite stent thrombosis. No further death or target lesion revascularization occurred.

Conclusions: MGS implantation seems safe and effective to prevent distal embolization in pts with STEMI and high TB after mechanical aspiration. A randomized trial is warranted to establish its role in pts with STEMI.