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Real Life Results of Primary PCI in STEMI: Mguard Stent VS BMS, DES

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Background:
The MGuard stent is designed to prevent distal embolization by reducing thrombus and plaque fragments released during PCI. The aim of this study was to compare 2 years follow up of patients after primary PCI with MGuard stent vs BMS, DES.

Methods:
A total of 276 patients (MGuard: 78, BMS: 142, DES: 53) who underwent primary PCI in setting of STEMI < 12 hours were enrolled in this single center registry. The baseline clinical characteristics and angiographic results were compared. The primary endpoint was MACE (Death, MI, TLR). The secondary enpoints were final TIMI flow grade, stent thrombosis and TLR. Patients with cardiogenic shock were excluded.

Results:
There was no difference in baseline epidemiologic and clinical characteristics among groups. Coronary angiography data showed that Mguard stent was implanted more in RCA (44.3%) than in LAD (31.6%) or LCX (24.1%) compared to BMS (RCA – 21.7%, LAD – 39.9%, LCX – 38.4%) and DES (RCA - 16.7%, LAD - 44.4%, LCX - 38.9%), (p=0.02). The TIMI thrombus score 4-5 was significantly higher in patients that received Mguard vs BMS, DES (85.2% vs 59.2%, 68%; p=0.01). The Mguard stent was used more in patient with initial TIMI flow 0 vs BMS, DES (64.4%, 50.5%, 35.1%). There was a tendency to lower MACE in Mguard group (7.5%) vs BMS, DES (13.5%, 10.2%; p=0.1) without achieving statistical significance. The final TIMI flow, rate of TLR and stent thrombosis were not statistically different among groups.

Conclusions:
This registry revealed that Mguard stent was implanted in lesions with a higher thrombotic burden. Despite that there are similar angiographic outcomes and the clinical follow-up showed a tendency to lower MACE after primary PCI with Mguard stent vs BMS, DES.