

The importance of new RBBB in acute extensive anterior ST elevation wall MI

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Background: Extensive anterior (EA) MI may be complicated by alterations in the conduction system (CS). A new LBBB in the ECG indicates EA MI. Alterations in the CS may affect the QRS and ST-T segment. We sought to investigate the prevalence of CS abnormalities in these patients and the effect of reperfusion therapy (RT)

Methods: We identified 82 pts with EA STEMI between Jan05–Oct07. ECG was performed upon admission and after RT. An echo was performed after the PCI in all

Results: Of the 82 pts (65 males, 25-85 y), 24 patients (29%) had previous CAD. LVEF after PCI ranged between 20-60%. 30 (36.5%) had CS alterations: 4 (4.8%) had LBBB, LVEF 25-40%; catheterization: mid LAD occlusion in 2 patients and before the 1st septal (SP) and 1st diagonal (DG) in the other 2. In 2/4 LBBB persisted after RT. 15 (18.3%) had RBBB - LVEF 20-45%, LAD was occluded before the 1st DG and the 1st SP in 12 and after the 1st SP and before the 1st DG in 3. In 7/15 RBBB remained after RT. In 7 (8.5%) IRBBB was observed - LVEF 25-60%, in 6 LAD was occluded before the 1st DG and the 1st SP and in one, after the 1st SP and before the 1st DG. In 5/7 IRBBB persisted after RT. In 3 patients (3.6%) LAHB was present, LVEF 30-40%, in all of them LAD was occluded after the 1st DG and before the 1st SP. In 2/3 LAHB persisted after RT. In 1 (1.2%) RBBB+LAHB were present and it persisted after RT with LVEF 30%; CAVB occurred in 1 patient - LVEF 25%. In both LAD was occluded before the 1st SP and the 1st DG. Hospital mortality occurred in 5/82 (6%), two with RBBB, one with LBBB, one without CS alteration and one with IRBBB

Conclusions: CS alterations in pts. with EA STEMI are more frequent than previously recognized. Their presence, and in particular their persistence after RT is associated with worse prognosis. RBBB is the most common conduction system alteration in extensive acute MI. A new RBBB with ST elevation indicates very extensive MI The persistence of RBBB after PCI is a sign of worse prognosis