VALVULAR HEART DISEASE

IMPACT OF CULPRIT LESION LOCATION ON THE INCIDENCE OF ISCHEMIC MITRAL REGURGITATION FOLLOWING ACUTE MYOCARDIAL INFARCTION: LONG-TERM ECHOCARDIOGRAPHIC FOLLOW-UP STUDY

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Background: Ischemic mitral regurgitation (IMR) is a common complication in patients with prior myocardial infarction. However, the impact of culprit lesion location on the incidence of IMR following acute myocardial infarction (MI) in the reperfusion era is not well investigated.

Methods: We studied consecutive 306 patients with acute MI who underwent emergent coronary angiography, and evaluated serially by transthoracic echocardiography during the follow-up period.

Results: There were 141 patients with anterior MI (Ant-MI group), including 79 patients who had proximal LAD lesion and 62 patients who had non-proximal lesion, and 165 patients with infero-posterior MI (IP-MI group), including 69 patients who had proximal RCA or LCX lesion and 96 patients who had non-proximal lesion. The median follow-up period was 46 months. There were no significant differences in Peak CPK level and positive left ventricular remodeling (end-diastolic volume change) between patients with proximal lesion and non-proximal lesion in both Ant-MI group (4109±4262 IU/l vs. 2862±2519 IU/l, P=0.06; 3±32 ml vs. -0.6±28 ml, P=0.86) and IP-MI group (2861±2256 IU/l vs. 2272±1802 IU/l, P=0.56; -2±28 ml vs. 0.1±23 ml, P=0.99). A total of 8 patients (10%) developed IMR (moderate or severe) in patients with proximal LAD lesion, whereas 1 patient (2%) had IMR in patients with non-proximal LAD lesion (P=0.027). On the other hand, there was no significant difference in the incidence of IMR between patients with proximal and non-proximal RCA/LCX lesion (9 patients, 13% vs. 9 patients, 9%, P=0.46).

Conclusions: Proximal LAD culprit lesion was associated with the development of IMR in patients with anterior MI, whereas proximal RCA or LCA culprit lesion was not associated with IMR incidence in patients with infero-posterior MI.