Abstract

Background: Ischemic mitral regurgitation (IMR) occurs in up to40% of patients affected by myocardial infarction. (1). IMR affects the myocardium rather than the valve itself and valve incompetence is the result of papillary muscles (PPMs) displacement , restricted systolic motion due to tethering forces that displaces the coaptation surface toward the left ventricle (LV) apex(2).

Aims: To study and discuss recent updates of the surgical management of ischemic mitral regurgitation according to the lastest evidence .

Several risk factors have been reported with specific cut-off values in preoperative echocardiography. Calafiore et al. (136) reported that patients with a coaptation depth of greater than 10 mm are likely to have residual or recurrent MR. Magne et al. (139) focused on the angle of the posterior leaflet in preoperative echocardiography, and found that recurrence was likely to occur if the angle is greater than 45.

Conclusion IMR is a progressive disease of bad prognosis due to papillary muscle displacement causing ventricular dilatation and ischemic cardiomiopathy, in case of acute IMR the best option is MVR, and in case of chronic IMR , Mild Mitral valve regurge CABG only is done with sparing the mitral valve , moderate to severe MV repair is the preferred technique however MVR is indicated when repair is not possible as in case of : Presence of severe leaflet tethering , cases of mitral insufficiency due to complex or uncertain mechanism (combinations of degenerative and IMR as well as mitral valves with rheumatic involvement) , unfavorable valve anatomy or when ejection fraction less than 30% , and in cases of severe mitral valve regurge MVR is preferred.

Keywords: Surgical Management, ischemic mitral regurgitation

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List of Abbreviations

AML	Anterior mitral leaflet
CABG	Coronary artery bypass graft
CMA	Carpentier-McCarthy-Adams
CPB	CardioPulmonary Bypass
CTSN	Cardiothoracic surgical trials network
IHD	Ischemic Heart disease
IMR	Ischemic mitral regurge
IVC	Inferior vena cava
LA	Left atrium
LV	Left ventricle
LVESVI	Left ventricular End systolic volume index
MA	Mitral annulus
MRI	Magnetic Resonance Image
MVR	Mitral valve replacement
NYHA	New York Heart Association
PML	Posterior mitral leaflet
PPMs	Papillary muscles
RIME	Randomized Ischemic Mitral Evaluation
SVC	Superior vena cava
TEE	Transoesophageal echo
TV	Tricuspid valve

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