Optimal medicamentous therapy for patients with severe mitral regurgitation

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Background: Mitral regurgitation (MR) represents the second most common valvular heart disease. It is classified as primary (organic) and secondary (functional) MR, with secondary being more frequent. Degenerative valvular disease, rheumatic fever, infective endocarditis and mitral valve prolapse are most common causes of primary MR. On the other hand, secondary MR is usually result of ischaemic heart disease or dilatative cardiomyopathy. Furthermore, according to haemodynamic echocardiographic parameters MR is classified as mild, moderate and severe¹. Treatment modalities include surgery and medications. Mitral valve repair and replacement represents the way of treating symptomatic severe MR, while medications have a role to prevent or slowing down the progression of mitral valve cusps degeneration and left ventricular remodeling¹.

Discussion: Among medications, beta-blockers, angiotensin converting enzyme inhibitors, aldosterone antagonists, calcium channel blockers are widely used for treating patients who are symptomatic, have decreased left ventricle systolic function and waiting for surgery or have contraindication for surgery². It has been showed that beta-blockers reduce MR, prevent further deterioration of left ventricular systolic function in patients with primary MR². Beta-blockers improve left ventricular function in chronic degenerative mitral regurgitation. Also, they improve NYHA functional class and left ventricular volumes in those with rheumatic mitral valve disease³. Angiotensin converting enzyme inhibitors (ACEI) and angiotensin receptor blockers (ARBs) reduces regurgitant volume and left ventricular size, mass and volumes in patients with primary MR². Renin-angiotensin system inhibitors improve survival rate in patients with secondary MR due to ischaemic heart disease³. Nitrates reduce left ventricular end diastolic and systolic volumes thereby reducing ventricular dilatation, while calcium channel blockers reduce regurgitant volume².

Conclusion: Optimal medication prevents left ventricular function worsening, improves NYHA functional class and survival rate. All above mentioned recommendations are based on small studies, different patient populations, patients using other cardioactive drugs, so further investigations should be done.

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LITERATURE

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