

REDUCE-AMI Trial: Effects of Beta-Blockers on Anxiety and Depression



Beta-blockers have long been a cornerstone in preventing further cardiovascular events following myocardial infarction (MI), based on early trials before modern treatments like percutaneous coronary intervention and antithrombotic agents became common. Beta-blockers work by reducing myocardial oxygen demand and preventing cardiac remodelling and arrhythmias. However, they can also cause adverse effects, such as hypotension, bradycardia, fatigue, exercise intolerance, and mental health symptoms like depression and anxiety.

Recent trials have questioned the necessity of beta blockers in post-MI patients with preserved left ventricular ejection fraction (LVEF $\geq 50\%$). The REDUCE-AMI trial found no long-term cardiovascular benefits of beta blockers for this group, while the ABYSS trial found no significant difference between discontinuing and continuing beta blockers in terms of safety and cardiac events. These conflicting results raise questions about the routine use of beta blockers for post-MI patients with preserved LVEF, especially considering the impact on mental well-being. Depression, commonly reported as a side effect, remains a point of concern, though previous studies have shown mixed findings.

In this context, a sub-study of the REDUCE-AMI trial aimed to explore the effects of long-term beta-blocker treatment on self-reported anxiety and depression levels in MI patients with preserved LVEF, assessing both short- and long-term mental health outcomes.

The study included 806 heart attack patients without heart failure. Half of these patients received beta blockers, while the other half did not. Among the beta-blocker group, including around 100 patients who had been on beta blockers before the study, symptoms of depression were more common.

Overall, study findings show that beta blockers led to slightly higher levels of depression symptoms in heart attack patients without heart failure. At the same time, these drugs did not provide a life-sustaining benefit for this particular group.

Many doctors still prescribe beta blockers to heart attack patients without heart failure, but the evidence supporting this practice is now weaker. These findings suggest that some patients are at an increased risk of depression without a clear benefit to their heart health. If beta blockers are not improving their heart outcomes, their use should be reconsidered to avoid unnecessary risk, conclude the researchers.

Source: [Uppsala University](#)
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Published on : Wed, 13 Nov 2024