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IMMEDIATE VERSUS DELAYED PERCUTANEOUS CORONARY INTERVENTION FOR PATIENTS WITH NON-ST ELEVATION-ACUTE CORONARY SYNDROME: A META-ANALYSIS OF RANDOMISED TRIALS

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Background: Studies have indicated that an early invasive strategy is favorable over a selective invasive strategy for Non-ST segment elevation acute coronary syndromes (NSTE-ACS). However, there is no general consensus on precisely how early should the revascularization be performed. Randomized controlled trials (RCTs) performed to compare the outcomes of revascularization less than 24 hours of presentation (Group A) versus greater than 24 hours of presentation (Group B) for NSTE-ACS have shown conflicting results.

Methods: Based on a systematic search seven RCTs (13,762 patients) comparing the composite of death and myocardial infarctions (MI) within 30 days of revascularization were included. The effects of both methods were analyzed by calculating pooled estimates for composite of death and MI, death, MI and revascularization.

Results: The incidence of the composite of death and MI was noted be lower in group A [607/7710(7.8%)] compared to group B [822/6052(13.5%)] but this was not statistically significant (OR 0.83, 95% CI, 0.62-1.12, P=0.22). Similar results were obtained for death (OR 0.58, 95% CI, 0.24-1.39) and MI (OR 0.93, 95% CI, 0.64-1.34) separately. In group A there was a significant decrease in the incidence of repeat revascularization [405/7398(5.5%)] as compared to group B [336/5734(5.9%)] [OR 1.34, 95% CI, 1.14-1.56, P<0.0003]. Two studies showed mortality benefit in high risk (TIMI score \geq 5-7, GRACE score>140) patients undergoing revascularization within 24 hours.

Conclusions: Performance of coronary artery revascularization within 24 hours of presentation does not reduce death and MI in NSTE-ACS as compared to intervention after 24 hours, but does significantly reduce the rate of repeat revascularization.