

Transradial versus transfemoral intervention for acute myocardial infarction: a propensity score-adjusted and -matched analysis from the REAL (REgistro regionale AngiopLastiche dell'Emilia-Romagna) multicenter registry.

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Source

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Abstract

OBJECTIVES:

This study sought to assess whether transradial intervention, by minimizing access-site bleeding and vascular events, improves outcomes in patients with ST-segment elevation myocardial infarction compared with the transfemoral approach.

BACKGROUND:

Bleeding and consequent blood product transfusions have been causally associated with a higher mortality rate in patients with myocardial infarction undergoing coronary angioplasty.

METHODS:

We identified all adults undergoing percutaneous intervention for acute myocardial infarction in Emilia-Romagna, a region in the north of Italy of 4 million residents, between January 1, 2003, and July 30, 2009, at 12 referral hospitals using a region-mandated database of percutaneous coronary intervention procedures. Differences in the risk of death at 2 years between patients undergoing transfemoral versus transradial intervention, assessed on an intention-to-treat basis, were determined from vital statistics records and compared based on propensity score adjustment and matching.

RESULTS:

A total of 11,068 patients were treated for acute myocardial infarction (8,000 via transfemoral and 3,068 via transradial route). According to analysis of matched pairs, the 2-year, risk-adjusted mortality rates were lower for the transradial than for the transfemoral group (8.8% vs. 11.4%; $p = 0.0250$). The rate of vascular complications requiring surgery or need for blood transfusion were also significantly decreased in the transradial group (1.1% vs. 2.5%, $p = 0.0052$).

CONCLUSIONS:

In patients undergoing angioplasty for acute myocardial infarction, transradial treatment is associated with decreased 2-year mortality rates and a reduction in the need for vascular surgery and/or blood transfusion compared with transfemoral intervention.