MECHANICAL THROMBECTOMY FOR ACUTE ISCHEMIC STROKE: systematic review and meta-analysis

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Introduction

Stroke is one of the main causes of death and disability in the world. The most common cause of stroke is ischemia, which must be diagnosed early and treated in a timely manner in its acute phase to minimize short- and long-term sequelae [1-3].

Objective

This study aims to evaluate the safety and efficacy of mechanical thrombectomy associated with standard medical treatment (MT+SMT) compared to standard medical treatment alone (SMT) for the treatment of patients with acute ischemic stroke.

Methods

A systematic review and meta-analysis of randomized controlled trials was conducted. An electronic search was performed in the Medline, Cochrane Library, Lilacs/Ibecs, and Embase databases, in addition to complementary searches. The selection of studies and data collection was carried out by two researchers independently.

Results

The final analysis included 16 publications, referring to 15 studies. The mechanical thrombectomy was associated to a reduction in the risk of death (16.81% vs. 20.13%; RR=0.85, p-value=0.04; Figure), improvement in the number of patients with functional independence after 90 days (45.65% vs. 27.45%; RR=1.65, p-value<0.01) and improvement in the rate of revascularization (76.2% vs. 33.85%; RR=2.20, p-value<0.01). There was no significant difference in terms of symptomatic intracranial hemorrhage (4.78% vs. 3.88%; RR=1.27, p-value=0.21).

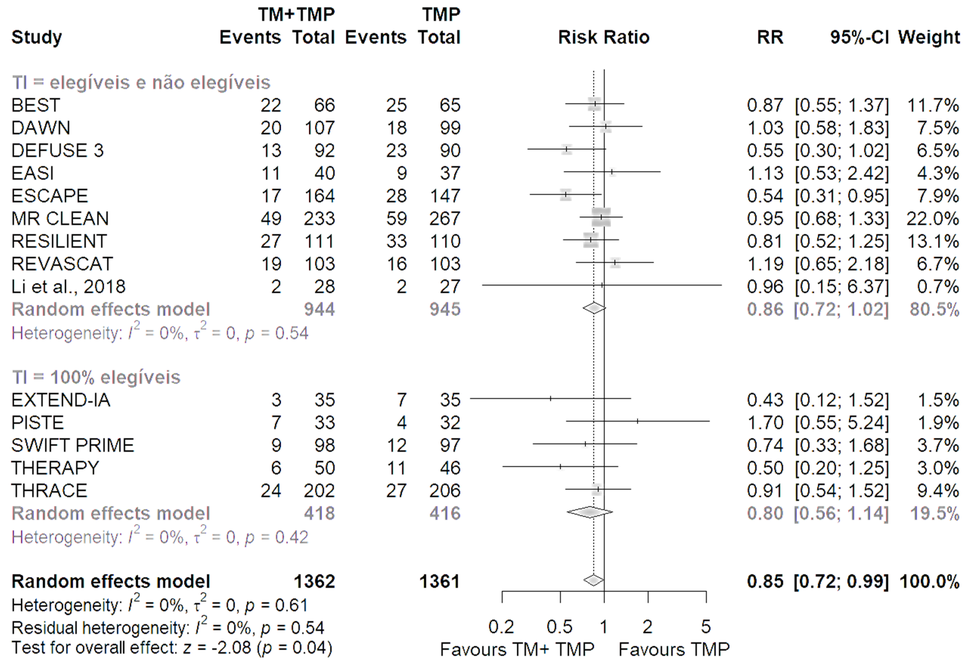

Figure. Forest graph of the meta-analysis of the outcome mortality from all causes, stratifying studies by eligibility criteria for intravenous thrombolysis

References

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