

The impact of SSRIs on mortality and cardiovascular events in patients with coronary artery disease and depression: systematic review and meta-analysis

Clinical Research in Cardiology (2020)

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Abstract

Background

Depression is common in patients after acute coronary syndromes (ACS) and with stable coronary artery disease (CAD) and has been associated with increased mortality and morbidity. However, it is unclear whether selective serotonin receptor inhibitors (SSRIs) reduce mortality or cardiac events in patients with CAD and depression.

Objective

We conducted a systematic review and meta-analysis to assess the effects of SSRIs on cardiovascular events in depressed CAD patients.

Method

The CENTRAL, MEDLINE, and PsycINFO databases were searched (April 2020) for randomized controlled trials (RCTs) and extended follow-up analyses of RCTs that compared SSRIs with placebo or no intervention in patients with CAD and depression. The primary outcomes were all-cause mortality, cardiovascular mortality, and myocardial infarction incidence. The results were calculated through random-effect meta-analyses and reported in terms of risk ratio (RR) with 95% confidence intervals (CI).

Results

We retrieved 8 RCTs (2 of which with extended follow-up analyses), comprising a total of 1148 patients. 7 studies only included post-ACS patients. SSRIs were associated with a significantly lower risk of myocardial infarction in patients with CAD and depression (RR 0.54, 95% CI 0.34–0.86), and in post-ACS patients with depression (RR 0.56, 95% CI 0.35–0.90). We found no statistically significant difference in all-cause mortality, cardiovascular mortality, hospitalizations, angina, congestive heart failure, or stroke incidence.

Conclusion

The use of SSRIs in post-ACS patients with depression was associated with a 44% relative risk reduction of myocardial infarction. No difference in mortality was found. Given that the quality of the evidence was low, further research is warranted.