

An intervention to treat depression and increase social support did not prolong event-free survival in coronary heart disease

ENRICHHD Investigators. Effects of treating depression and low perceived social support on clinical events after myocardial infarction: the Enhancing Recovery in Coronary Heart Disease Patients (ENRICHHD) Randomized Trial. *JAMA*. 2003;289:3106-16.

QUESTION

In patients with recent myocardial infarction (MI) who are depressed or have low perceived social support (LPSS), does an intervention to treat depression and increase social support reduce recurrent MI and death?

DESIGN

Randomized (allocation concealed*), blinded (monitoring committee),* controlled trial with mean 29-month follow-up (Enhancing Recovery in Coronary Heart Disease Patients [ENRICHHD]).

SETTING

73 hospitals at 8 U.S. clinical centers.

PATIENTS

2481 patients (mean age 61 y, 56% men) who had an MI within the past 28 days and had current depression (ENRICHHD-modified *Diagnostic and Statistical Manual of Mental Disorders, 4th edition [DSM-IV]* criteria), LPSS (ENRICHHD Social Support Instrument), or both. Exclusion criteria included acute MI after coronary intervention, psychotherapy for depression, noncardiac conditions with life expectancy < 1 year, serious illness, and major comorbid psychiatric conditions. All patients were included in the analysis.

INTERVENTION

Patients were allocated to a cognitive behavior therapy (CBT)-based intervention ($n = 1238$) or usual care ($n = 1243$). Trained therapists administered CBT tailored for depression and LPSS. Intervention-group patients who had Hamilton Rating Scale for Depression scores > 24 and < 50% reduction in Beck Depression Inventory scores after 5 weeks were eligible for sertraline, 50 mg/d to a maximum of 200 mg/d.

MAIN OUTCOME MEASURES

A composite endpoint of recurrent MI or all-cause mortality.

MAIN RESULTS

Analysis was by intention to treat. 39% of patients were depressed, 26% had LPSS, and

34% met both criteria. Groups did not differ for the composite endpoint or for the individual components (Table).

CONCLUSION

In patients with recent myocardial infarction (MI) who were depressed or had low perceived social support, cognitive behavior therapy plus antidepressant drugs (if indicated) did not reduce recurrent MI and death.

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*See Glossary.

Cognitive behavior therapy intervention vs usual care for recent myocardial infarction (MI) with depression or low perceived social support†

Outcomes at mean 29 mo	Intervention	Usual care	Hazard ratio (95% CI)
Death or nonfatal MI	24.2%	24.1%	1.01 (0.86 to 1.18)
All-cause mortality	13.6%	13.8%	0.98 (0.79 to 1.21)
Recurrent nonfatal MI	13.6%	13.7%	0.90 (0.71 to 1.14)

†CI defined in Glossary. All comparisons are not significant.

COMMENTARY

Depression and LPSS are risk factors for morbidity and mortality in patients with coronary heart disease (CHD) (1, 2). Although it has been shown that antidepressant treatment is effective in treating the symptoms of recurrent depression after acute MI or unstable angina (3), no trial has shown that treating depression with counseling or antidepressants after acute MI improves mortality or recurrent MI risk.

Spontaneous remission in the usual care group and patients in the usual care group obtaining treatment for depression outside of the study may have been confounding factors. For example, the cumulative use of antidepressants in both arms increased from 4.8% to 20.6% in the usual care group, and from 9.1% to 28% in the intervention group. This raises the possibility that any beneficial effect of CBT was hidden by the beneficial effect of increasing antidepressant use by the usual care group. It may also explain why the intervention group had improved depression and LPSS scores more than the usual care group at 6 months ($P < 0.001$), while group differences diminished over time, showing no differential benefit of the intervention at 30 to 42 months ($P > 0.10$).

Finally, as has been found for other interventions for CHD (angiotensin-converting enzyme inhibitors and statins), a 6-month

study may be too brief to detect a difference in events occurring much later after the acute event.

The ENRICHHD intervention did not provide a survival benefit that could be seen during the time frame of the study. However, the intervention decreased depression and increased social support during the first 6 months. Additional research is needed to determine the optimal timing and duration of such interventions. In addition, the potential benefits of selective serotonin-reuptake inhibitors on cardiac endpoints should be studied with random assignment to pharmacotherapy.

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