

Long-term effects of an intensive prevention program (IPP) after acute myocardial infarction - the IPP Follow-up and Prevention Boost Trial

Authors:

H Wienbergen¹, A Fach¹, S Meyer², J Schmucker¹, R Osteresch¹, S Michel¹, T Retzlaff¹, M Steckenborn¹, A Elsaesser², H Langer³, R Hambrecht¹, ¹Hospital Links der Weser, Bremen Institute for Heart and Circulation Research - Bremen - Germany, ²Heart Center Oldenburg - Oldenburg - Germany, ³University Heart Center - Luebeck - Germany,

On behalf: IPP study group

Topic(s):

Secondary Prevention

Background:

The effects of an intensive prevention program (IPP) for 12 months following 3-week rehabilitation after myocardial infarction (MI) have been proven by the randomized IPP trial. The present study investigates if the effects of IPP persist one year after termination of the program and if a reintervention after > 24 months ("prevention boost") is effective.

Methods:

In the IPP trial patients were recruited during hospitalization for acute MI and randomly assigned to IPP versus usual care (UC) one month after discharge (after 3-week rehabilitation). IPP was coordinated by non-physician prevention assistants and included intensive group education sessions, telephone calls, telemetric and clinical control of risk factors. Primary study endpoint was the IPP Prevention Score, a sum score evaluating six major risk factors. The score ranges from 0 to 15 points, with a score of 15 points indicating best risk factor control. In the present study the effects of IPP were investigated after 24 months – one year after termination of the program. Thereafter, patients of the IPP study arm with at least one insufficiently controlled risk factor were randomly assigned to a 2-months reintervention ("prevention boost") vs. no reintervention.

Results:

At long-term follow-up after 24 months, 129 patients of the IPP study arm were compared to 136 patients of the UC study arm. IPP was associated with a significantly better risk factor control compared to UC at 24 months (IPP Prevention Score 10.9 ± 2.3 points in the IPP group vs. 9.4 ± 2.3 points in the UC group, $p < 0.01$). However, in the IPP group a decrease of risk factor control was observed at the 24-months visit compared to the 12-months visit at the end of the prevention program (IPP Prevention Score 10.9 ± 2.3 points at 24 months vs. 11.6 ± 2.2 points at 12 months, $p < 0.05$, Figure 1).

A 2-months reintervention ("prevention boost") was effective to improve risk factor control during long-term course: IPP Prevention Score increased from 10.5 ± 2.1 points to 10.7 ± 1.9 points in the reintervention group, while it decreased from 10.5 ± 2.1 points to 9.7 ± 2.1 points in the group without reintervention ($p < 0.05$ between the groups, Figure 1).

Conclusions:

IPP was associated with a better risk factor control compared to UC during 24 months; however, a deterioration of risk factors after termination of IPP suggests that even a 12-months prevention program is not long enough. The effects of a short reintervention after > 24 months („prevention boost") indicate the need for prevention concepts that are based on repetitive personal contacts during long-term course after coronary events.

[Points IPP
Prevention Score]

