Abstract: **P1228**

Which role plays the school degree in effectiveness of prevention after myocardial infarction?

Authors:
T. Backhaus[1], S. Michel[1], S. Meyer[2], A. Fach[1], J. Schmucker[1], R. Osteresch[1], J. Stehmeier[1], T. Wettwer[1], H. Haase[3], A. Elsaesser[2], R. Hambrecht[1], H. Wienbergen[1], [1]Hospital Links der Weser, Bremer Institut für Herz- und Kreislaufforschung (BIHKF) - Bremen - Germany, [2]Oldenburg Hospital - Oldenburg - Germany, [3]RehaZentrum - Bremen - Germany,

Topic(s):
Secondary Prevention

Introduction: Registry studies have shown that a low social status is associated with a high incidence of myocardial infarction (MI). Furthermore, risk for reinfarctions is higher in patients with less income. The study's hypothesis is, that the school degree has an important impact on the effectiveness of secondary prevention after MI. Patients with a lower school degree might not be able to benefit substantually by prevention efforts.

Methods: This analysis is a substudy of the randomized, multicentric IPP (Intensive Prevention Program) study, which showed effectiveness of a 12-months program of intensive prevention versus usual care (UC). Primary endpoint was a scoring system called IPP-Prevention-Score (0 to 15 points), indicating the individual risk by different risk factors (0 = highest risk profile; 15 = lowest risk profile). In this analysis the study population was divided into three groups according to their school-leaving qualification (1: completed secondary school, n=68; 2: middleschool, n=115; 3: grammar school, n=67).

Results: When presenting with MI at hospital, risk factors differed between the three groups. Patients with lowest school degrees showed significant higher levels of LDL-cholesterol (group 1: 134±33mg/dl, group 2: 137±42 mg/dl, group 3: 115±38mg/dl; p=0,028) and were less physical active (group 1: 626±1512 kcal/week, group 2: 502±973 kcal/week, group 3: 1362±229 kcal/week; p=0,008). Furthermore, patients who completed secondary school were more likely to smoke and had less points in the IPP Prevention Score, indicating a lower rate of risk factors in the guideline-recommended target compared to patients with higher school degree (IPP-prevention-score: group 1: 6.8±2.3; group 2: 7.4±2.4; group 3: 9.1±2.7; p<0,001)

One month after discharge risk factors improved in both study populations (IPP versus UC). During the following 12 months, risk factors further decreased significantly in all school qualifications by IPP. Patients with completed secondary school, who initially presented lowest IPP Score and highest risk factors, showed best improvement after 12 month of IPP (IPP-prevention-score: group 1: Δ4,0±2,4; group 2: Δ3,7±2,3; group 3: Δ2,5±3,1; p=0,046).

Conclusion: Patients with MI and different school-leaving qualification presented different levels of risk factors. A three-week rehabilitation program after MI and a 12-months of intensive prevention resulted in improved risk factors in all different school qualifications. Contrary to the study's hypothesis, patients with lowest school degree, who showed initially an unfavourable risk profile, reached highest effects out of the prevention program.