Impact of cardiac rehabilitation referral on one-year outcome after discharge of patients with acute myocardial infarction

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Background Cardiac rehabilitation after an acute myocardial infarction has a class I recommendation in the present guidelines. However, data about the impact on mortality in Switzerland are not available. Therefore, we analysed one-year outcome of acute myocardial infarction patients according to cardiac rehabilitation referral at discharge. Design and methods Data were extracted from the Swiss AMIS Plus registry and included patients with ST-elevation myocardial infarction and non-ST-elevation myocardial infarction, who were asked to give their informed consent to a telephone follow-up one year after discharge. Results From 10,141 patients, 1956 refused to participate in follow-up and 302 were lost to follow-up. There were 4508 (57.2%) patients with cardiac rehabilitation referrals compared with 3375 (42.8%) without. Patients referred to cardiac rehabilitation were younger (62.4 years vs. 68.8 years), more often male (77% vs. 70%), presented more often with ST-elevation myocardial infarction (63.5% vs. 52.1%) and, apart from smoking (44.0% vs. 34.9%), they had fewer risk factors, such as dyslipidaemia (55.0% vs. 60.1%), hypertension (55.6% vs. 65.3%) and diabetes (16.7% vs. 21.5%). Patients referred to cardiac rehabilitation had a lower crude one-year all-cause mortality (1.7% vs. 5.8%; p < 0.001) and lower rates of re-infarction, rehospitalization for cardiovascular disease and intervention (all p < 0.005). In a multivariable logistic regression analysis, cardiac rehabilitation was an independent predictor for lower mortality rate (odds ratio 0.65; 95% confidence interval 0.48-0.89; p = 0.007). Conclusions Although the detailed data of cardiac rehabilitation programmes and patient participation were not available for this study, our data from 7883 acute myocardial infarction patients showed a better one-year outcome for patients with cardiac rehabilitation referrals than for those without.