



Electrocardiographic unrecognized myocardial infarction does not improve prediction of cardiovascular events beyond traditional risk factors. The Tromsø Study.

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Abstract: Background Unrecognized myocardial infarction (MI) is a frequent and intriguing entity associated with a similar risk of death as recognized MI. Previous studies have not fully addressed whether the poor prognosis is explained by traditional cardiovascular risk factors. We investigated whether electrocardiographically detected unrecognized MI was independently associated with cardiovascular events and death and whether it improved prediction for future MI in a general population. Design Prospective cohort study. Methods We studied 5686 women and men without clinically recognized MI at baseline in 2007-2008. We assessed the risk of future MI, stroke and all-cause mortality in persons with unrecognized MI compared with persons with no MI during 31,051 person-years of follow-up. Results In the unadjusted analyses, unrecognized MI was associated with increased risk of future recognized MI (hazard ratio 1.84, 95% confidence interval (CI) 1.15-2.96) and all-cause mortality (hazard ratio 1.78, 95% CI 1.21-2.61), but not stroke (hazard ratio 1.09, 95% CI 0.56-2.17). The associations did not remain significant after adjustment for traditional risk factors (hazard ratio 1.25, 95% CI 0.76-2.06 and hazard ratio 1.38, 95% CI 0.93-2.05) for MI and all-cause mortality respectively. Unrecognized MI did not improve risk prediction for future recognized MI using the Framingham Risk Score ($p=?.96$) or the European Systematic COronary Risk Evaluation ($p=?.65$). There was no significant sex interaction regarding any of the endpoints. Conclusion Electrocardiographic unrecognized MI was not significantly associated with future risk of MI, stroke or all-cause mortality in the general population after adjustment for the traditional cardiovascular risk factors, and it did not improve prediction of future MI.

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