LOW PHYSICAL PERFORMANCE PREDICTS CARDIAC DEATH IN MEN INDEPENDENT OF ECG RESPONSE

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BACKGROUND: Poor physical performance has been associated with an increased risk of cardiovascular death. We tested the hypothesis that cardiac death is more likely to occur in the presence of low physical performance among subjects who underwent maximal symptom-limited exercise test.

METHODS: A total number of 3211 subjects aged 52 (SD10) years (males n=2107, females n=1104) residing in Northern Finland entered the diagnostic exercise test. We examined data on the subjects’ peak exercise capacity in terms of maximal work output (Wpeak) as well as ECG response and cardiac deaths.

RESULTS: During the mean follow-up of 14 (SD3) years, 110 (3.4%) subjects died because of cardiac reasons. In univariate analysis, the risk of cardiovascular death was increased in subjects with positive ECG finding (ST-segment depression ≥ 1.5 mm) in the exercise test, OR being 3.9 (95% CI 2.5-6.0) and 5.2 (95% CI 2.1-13.0) in males and females, respectively (p<0.001). After adjustment for age and BMI, a positive ECG response remained a highly significant independent risk factor for cardiac death among males (OR 2.7, p<0.001) and females (OR 2.4, p<0.0001). Wpeak <140 W in men and <75W in women in combination to positive ECG finding did not predict cardiac death, whereas with negative ECG finding low work output was associated with cardiac death in univariate analysis (OR 5.0 and 4.5, respectively, p<0.005). After adjustment with age and BMI the risk for cardiac death remained increased in men (OR 3.0, 95% CI 1.6-5.7, p<0.001), but not in women. Low physical performance did not associate with cardiac death in ECG positive subjects.

CONCLUSIONS: Low physical performance predicts cardiac death in men, but not in women, independent of ECG response

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