PREDICTORS OF EXERCISE PERFORMANCE AFTER CARDIAC REHABILITATION

Poster Contributions
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Background: The 6-minute walk test has shown value in the risk prediction of stable coronary artery disease. The primary objective of the present study was to evaluate predictors for exercise performance after Phase II cardiac rehabilitation program (CRP) at Mayo Clinic Florida during a 10-year period.

Methods: We analyzed 448 patients that were enrolled in the CRP. Variables recorded included basic demographics, lipid profile, blood pressure and heart rate measurements before and after a 6-minute walk test as well as reported time spent as exercise before the index event. These characteristics were measured before enrolling into the program. Subsequently a multiple linear regression model was applied to determine the impact of pre-rehabilitation variables on the response variable difference in walking distance.

Results: A total of 448 patients completed the program with a mean age of 69 ± 13 years (median, 70; range 26 to 96) and 72 % of patients being male. Difference in walking distance significantly decreased with increased age (p=0.01; B=-2.8), increased systolic blood pressure at rest (p=0.04; B=2.6), increased heart rate at peak exertion (p<0.001; B=6.3), increased systolic blood pressure at peak exertion (p=0.04; B=2.4), and increased body mass index (BMI) (p=0.05; B=5.5). Difference in walking distance increased with the amount of reported time spent exercising before the index event (p<0.001; B=6.4).

Conclusion: Difference in walking distance was significantly decreased if age, BMI, systolic blood pressure before, during or after exertion and heart rate at peak exertion were higher before enrolling in the program. In contrast it increased with the amount of reported time spent exercising before the index event. Potentially modifiable risk factors at baseline have a significant impact on the effectiveness of CRP.