BRACHIAL ARTERY FLOW-MEDIATED DILATION PREDICTS THE RESTORATION OF EXERCISE TOLERANCE

Poster Contributions
Hall C
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**Background:** The purpose of this study was to examine which factors contribute to the improvement of exercise tolerance in cardiac rehabilitation (CR) patients.

**Methods and Results:** We included consecutive 40 patients (mean age 66 ± 12 years, 80% male) in early outpatient CR who underwent cardiopulmonary exercise (CPX) test and brachial artery flow-mediated dilation (FMD) test. Following 155 ± 11 days and 44 ± 8 sessions, 37 patients (92.5%) showed increase in peak VO2 and 36 patients (90%) showed increase in VO2 at the anaerobic threshold (VO2 AT). There was a significant relationship (r = 0.565, P < 0.001) between the percent change of peak VO2 and pre-FMD. Stepwise multiple regression analysis revealed that pre-FMD and pre-VO2 AT were independently related to the percent change of peak VO2 (P < 0.05). However pre-LVEF, pre-BNP, pre-peak VO2 and pre-02 pulse were not associated with the percent change of peak VO2.

**Conclusion:** These results suggest that basal endothelial function might be a powerful factor to restore exercise tolerance.