Treadmill Measured vs. Questionnaire Estimated Changes in Walking Ability in Patients With Peripheral Artery Disease

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Résumé en anglais	OBJECTIVE: Determining the maximum walking time (MWT) using the treadmill test is the gold standard method for evaluating walking capacity and treatment effect in patients with peripheral arterial disease (PAD). However, self reported functional disability is important when assessing quality of life. Changes in the Walking Estimated Limitation Calculated by History (WELCH) questionnaire scores were compared with the MWT. METHODS: A cross sectional study was performed in patients with intermittent claudication. The treadmill test (3.2 km/h; 10% gradient) and WELCH questionnaire were administered to all patients for objective evaluation of walking capacity. Given the log normal distribution of these parameters in patients with PAD, a log transformation was applied to the WELCH score (LnW) and maximum walking time (LnT). The responsiveness of the WELCH score was determined using mean changes and correlation coefficients of LnW and LnT changes. The effect of time on the "estimated minus real" (E - R) changes (LnW - change minus LnT - change) was assessed after categorisation of patients into various test-retest intervals. Patients who underwent lower limb revascularisation between the two tests and those who underwent medical treatment only were analysed. RESULTS: Correlation coefficients between LnW and LnT for tests 1 and 2 were r = 0.514 and r = 0.503, respectively (p < .001, for both). Correlation for LnW change vs. LnT change was 0.384 (p < .001). E - R was positive only early after surgery. E - R was negative for all test-retest intervals >1 year in revascularised and non-revascularised patients. CONCLUSION: Changes in WELCH scores correlated with changes observed on the treadmill in patients with intermittent claudication. For long test-retest intervals, WELCH changes tended to overestimate the worsening of walking impairment as compared with the measured difference observed in both revascularised and non-revascularised patients. A shortlived "honeymoon" (overestimation of the benefit for the shortest test-retest interval) was observed only in revascularised patients.
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