

Maximal cardiovascular fitness and its correlates in ambulatory hemodialysis patients

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摘要

Abstract

Background: Studies focusing on maximal cardiovascular fitness in ambulatory hemodialysis patients are lacking. The main purpose of this study is to look at maximal cardiovascular fitness in ambulatory hemodialysis patients, and the secondary purpose is to look at correlates with such fitness. Methods: We studied maximal cardiovascular fitness in ambulatory hemodialysis patients and age-matched controls. Correlates of maximal oxygen consumption with functional and physical performance, psychiatric symptoms, cognitive function, quality of life, duration of dialysis therapy, and adequacy of dialysis also were examined. Results: We found ambulatory hemodialysis patients to have 72% to 79% of physical performance and 71% of maximal oxygen consumption compared with age-matched controls. In ambulatory hemodialysis patients, maximal oxygen consumption correlated not only with age and physical performance (the distance walked in a 6-minute walk test, bilateral handgrip strength, and chair-rising time), but also with a psychiatric symptom (losing confidence in oneself) and quality of life (feeling safe in one's daily life). However, multiple regression analysis showed that chair-rising time was the only variable that correlated negatively with maximal oxygen consumption in ambulatory hemodialysis patients. Conclusion: Based on the relatively poor maximal cardiovascular fitness in ambulatory hemodialysis patients compared with age-matched controls, an additional fitness training program for these patients is needed