

An old and new assessment of frailty and heart failure in the elderly: The correlation between kamposcores, the timed up and go test, and indices with echocardiography

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Abstract

There is, obviously, a growing interest within the concept of “frailty” in various areas of drugs. Gait speed could be a key component of evaluating frailty. The Timed “Up and Go” Test (TUG) may be a commonly used measure of functional mobility within the elderly. Meanwhile, optimal design of noninvasive evaluations for diastolic cardiopathy (HF) remains limited thanks to the deficiency of easy clinical criteria. Furthermore, numerical scoring systems to judge patients’ physical conditions are induced in Kampo-medicine (Japanese Traditional Medicine). Suitai (water stagnation)-score and Qi (vital energy)-deficiency (QD)-score are one among so-called Kampo-scores. Objectives: This study aimed to look at the correlation between the TUG, Kampo-scores, and therefore the indices with echocardiography in hemodialysis outpatients with chronic HF. Methods: We studied 46 outpatients at the hemodialysis unit with simultaneous Kampo-scores, the TUG, cardiographical indices with Doppler. The TUG score is that the seconds it takes to finish the assignment (a patient stands, walks 3 m, turns, and returns and sits down). We estimated the Kampo-scores with questionnaire and physical examination. We also measured and compared Kamposcores, the TUG and echocardiographical indices by regression toward the mean. Results: a number of the Kampo-scores (Suitai-score and QD-score) had correlational statistics to the TUG [$r=0.68$, $p<0.003$, $r=0.65$, $p<0.04$]. E/e’ had correlation to the TUG [$r=0.70$, $p<0.00001$]. Suitai-score had direct correlation to E/e’ [$r=0.75$, $p<0.001$]. Conclusions: Our data suggest that Kampo-scores, which are simple, non-invasive and cost-effective clinical assessments, especially Suitai-score and QD-score, is wont to define clinical evaluation of frailty in hemodialysis outpatients with chronic HF.

Frailty may be a complex clinical syndrome related to ageing and chronic illness, resulting from multiple organ impairment; physiological reserves decrease and vulnerability to stressors increase. The role of frailty in

upset has become increasingly recognised. Up to 79% of patients with heart condition are frail. Moreover, frailty is related to a worse quality of life and poor prognosis. This review summarises the available literature on frailty in HF and highlights indications for its management. Although the precise pathogenesis of frailty in HF has not been fully elucidated, shared pathophysiologic mechanisms may help explain the complex relationships among frailty, comorbidity and disability. In keeping with the American Geriatrics Society/National Institute on Aging Research Conference on Frailty in Older Adults a “dependency cascade” may occur. This term indicates a progressive series of injury across multiple organ systems, starting from functional decline to disability and death. The foremost common deficits relate to mobility, strength, balance, motor processing, cognition, nutrition, endurance and physical activity. The incidence of FS increases with age, that the number of patients with concurrent FS and HF is anticipated to rise. Frailty is taken into account one in all the foremost important issues related to human ageing, and this has significant implications for patients and therefore the healthcare system. The connection between frailty and the next risk of falling, loss of functional independence, reduced quality of life, institutionalisation and mortality has been clearly demonstrated. Both frail patients and people with HF may demonstrate poor tolerance of exertion, exhaustion and loss of weight (muscle mass). Distinguishing frailty syndrome from failure is also particularly difficult within the elderly, who tend to indicate HF with preserved ejection fraction. Up to 25% of elderly patients with heart condition show frailty, and frail patients have an increased risk of developing cardiopathy.

Frailty in chronic HF has been reported as possibly reversible during a study of patients undergoing heart transplantation or implantation of ventricular assist devices. There seems to be a transparent relationship between HF, ageing and frailty; however, this is often poorly understood. All of the above-mentioned conditions are related to elevated inflammatory markers, so a standard

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inflammatory background has been proposed. this will be attributed to many mechanisms. A model of sterile inflammation has been proposed, where the breakdown of tissue (sterile cell necrosis without microbial invasion) connected with conditions like ageing, MI and HF frees cellular substances, which successively provokes a degree of reaction. Such a mechanism seems to elucidate a number of the common features of HF, ageing and frailty, because most of the signs and symptoms common in these conditions will be attributed to sarcopenia (loss of muscle mass). during this model, degradation of muscle causes chronic, sterile inflammation. Frailty could be a syndrome characterized by weakness, fatigue, and increased vulnerability to physiologic stressors. Although most frequently related to aging, frailty is additionally a recognized component of chronic illness. because the prevalence of chronic disease increases with age, role of

frailty in disease diagnosis and management takes on additional importance. Over 20 different scales are proposed to define and measure the syndrome of frailty.³ the bulk of those tools include a measure of a minimum of one each of the five domains that compose the frailty phenotype. Frailty is defined as a multidimensional physiological syndrome, which mainly occurs in people aged above 65 years. it's connected with a major decrease of physiological reserve caused by numerous co-morbidities, influence of stressors, and generally the failure of homeostasis. it's the results of both the processes going down within the body and also the influence of the external environment on human organism. This finally results in losses of energy, physical and cognitive ability, and health. one amongst the important factors determining the emergence and manifestation of this syndrome is that the reduced physiological reserve of the body.