Functional capacity evaluation in acute isquemic patients

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Background: An acute ischemic event may cause a functional deterioration even in previously autonomous patients. The determination of functional capacity is relevant to determine health indicators for rehabilitation nursing care, allowing at the same time to determine the patient's functional status throughout their health-disease cycle and to prescribe exercise-based rehabilitation for home-based programs. The six-minute walking test is widely used in studies involving cardiac patients, however, reference values for ischemic population after immediate clinical stabilization are not known. Also the 6MWT has a prognostic value for cardiac patients, being of utmost importance to evaluate it, after clinical stabilization in order to properly determine goals for patient´s rehabilitation process.

Aim: Determine the functional capacity level of ischemic patients, by gender and type of event, after clinical stabilization using the 6-minute walking test.

Methods: Using the 6-minute walking test, the functional capacity of ischemic inpatients was evaluated at discharge, after clinical stabilization. Patients with acute coronary syndrome with and without ST-segment elevation were included. All patients were accompanied by the rehabilitation nursing team during the in-hospital stay period and performed phase 1 cardiac rehabilitation. The 6MWT was performed based on the 2016 ATS guidelines and the expected value of the distance covered was determined based on the Enright equation. The sample was divided by gender, taking into account their widely known differences in functional capacity and also by event, namely ST elevation and Non ST-segment elevation myocardial infraction. The profile of modifiable cardiovascular risk factors (CRF) was also evaluated, being considered the following: Hypertension, Dyslipidemia, obesity, tobacco, sedentary lifestyle and stress.

Results: A total of 303 patients were studied (229 male), with a mean age of 62 years (men) and 62 (women). About 36% of men and 7% of women were admitted with ST elevation Myocardial Infraction, with a mean number of cardiovascular risk factors (CVRF) of 3.2 in men and 3.9 in women. The most prevalent CVRF in females is dyslipidemia and sedentary lifestyle, while in males it is dyslipidemia.
The sample was divided in two groups by type of event, namely ST-elevation (group A) and NonST-elevation (group B) and in each group, data was evaluated by gender.
A statistically significant difference ($p<0.01$ for males and $p<0.02$ for female) was found between the value of the 6MWT performed (441.2 meters – males; 369.5 meters - females) compared to the value estimated by the equation (559.9 males; 482.8 female gender). There is a very significant difference between the expected value and the value actually covered in the walking test. It may be pertinent to define reference values for this typology of patients, so that their functional capacity can be properly measured.