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SUBMAXIMAL FIELD WALKING TESTS APPLIED IN THE CARDIOPULMONARY ASSESSMENT OF CHILDREN WITH CONGENITAL HEART DISEASE: A SYSTEMATIC REVIEW

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Background: Submaximal field walking tests are easy to apply and low cost, but it is necessary to standardize their application, especially in the pediatric population. The feasibility and its use in patients with congenital heart disease (CHD) have been studied.

Objectives: To verify the submaximal field walking tests applied in the cardiopulmonary evaluation of children and adolescents with CHD.

Methods: Literature systematic review, the search for scientific articles was carried out in the electronic databases Medical Literature Analysis and Retrieval System Online (MEDLINE via PubMed), Latin American and Caribbean Literature in Health Sciences (LILACS), Cochrane Library, Physiotherapy Evidence Database (PEDro), Scientific Electronic Library Online (SciELO) and ScienceDirect, structured in PICO format, without date restrictions. For the search strategy, words from the Medical Subject Heading Terms (MeSH) dictionary were used with the following descriptors: [(“Congenital Heart Defects” OR “Congenital Heart Defect” OR “Malformation of Heart” OR “Heart Abnormality” OR “Congenital Disorders” OR “Neonatal Diseases and Abnormalities” OR “Tetralogy of Fallot” OR “Tricuspid Atresia” OR “Ebstein Anomaly” OR “Ebstein’s Malformation” OR “Birth Defects” OR “Congenital Abnormalities”) AND (“Walk Test” OR “6 -min Walk Test” OR “6-minute Walk Test” OR “Six-minute Walk Test” OR “Endurance Shuttle Walk Test”)], which were later adapted to the other bases that were used in this review. Looking for studies that used submaximal field walking tests in children and adolescents with congenital heart disease aged 5 to 18 years. Methodological quality, effectiveness and safety and risk of bias were assessed.

Results: Five studies met the eligibility criteria with a sample of 160 individuals with CHD, and all used the six-minute walk test (https://www.physio-pedia.com/Six_Minute_Walk_Test/_6_Minute_Walk_Test6MWT). Note that different methodologies and modifications are used. The only clinical trial showed good methodological quality. Four studies had a low risk of bias, and one had a moderate risk.

Conclusion: In this review, the 6MWT proved to be the first-choice method for assessing exercise capacity in children and adolescents with CHD, however, the lack of standardization in the application of the test became evident, which made it difficult to compare the results.

Implications: Reducing the limitations and heterogeneity in the application of the test will enable more concrete outcomes and facilitate their reproduction in clinical practice.

Keywords: Pediatrics, Congenital Heart Disease, Field walking test

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SCREENING FOR FRAILTY, NUTRITION AND MUSCLE STRENGTH OF HOSPITALIZED ELDERLY

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Background: The increase in life expectancy in recent years has brought a scenario of multimorbidities and the presence of geriatric syndromes, such as frailty, making the elderly vulnerable to decompensation and hospitalizations. In addition, nutritional status and muscle strength have a significant association with frailty, so their characterization in the hospitalized elderly population is extremely relevant since such conditions are accompanied by adverse clinical outcomes, increasing the length of hospitalization and mortality. From this, it is possible to program multidisciplinary strategies and outline the best individualized intervention for these patients, aiming at an early discharge and higher quality of life.

Objectives: To evaluate the presence of frailty, nutritional status, and muscle strength of hospitalized elderly.

Methods: This is a prospective, observational, and cross-sectional study in which patients hospitalized in the ward of a University Hospital over 60 years of age were evaluated. Data were collected from medical records and characterization of the sample. Patients were assessed for frailty screening (Fried criteria), nutritional assessment through mini nutritional assessment (MAN) and handgrip strength.

Results: Partial data from 51 study participants were analyzed. Regarding frailty, according to Fried’s criteria, 90.2% of the patients were classified as frail, 9.8% as pre-frail, and none as non-frail. The MAN scores reveal that, in relation to nutritional status, 19.6% are at risk of malnutrition and 43.13% are malnourished. Regarding muscle strength, 66.66% of men and 76.9% of women had muscle weakness, with the mean of men of 27.6 ± 11.43 (76.66% of predicted) and of women of 19.3 ± 5.76 (83.91% of predicted).

Conclusion: Hospitalized elderly are mostly fragile and have nutrition deficits and peripheral muscle weakness.

Implications: Faced with the presence of frailty, nutritional deficit, and muscle weakness, future intervention studies deserve attention to minimize damage to the independence and functionality of the elderly.

Keywords: Hospitalization, Elderly, Frailty

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