

Physical Function and Physical Activity Preferences of Elderly Individuals Admitted for Elective Abdominal Surgery: A Pilot Study.

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Abstract : Individuals often experience a reduction in physical function, quality of life and basic activities of daily living after surgery. This is exponentially true for high-risk patients, especially the elderly and frail individuals. Not much is known about the physical function, physical activity preferences and factors associated with the six-minute walk test of elderly individuals who would undergo elective abdominal surgery in South Africa. Such information is important to design effective prehabilitation physiotherapy programs prior to elective surgery. The purpose of the study was to describe the demographic profile and physical function of elderly patients who would undergo elective surgery and to determine factors associated with their six-minute walk test distance findings. A cross-sectional descriptive study in elderly patients older than 60 years of age who would undergo elective abdominal surgery were consecutively sampled at a private hospital in Pretoria, South Africa. Participants' demographics were collected and physical function assessed with the Functional Comorbidity Index (FCI), DeMorton Mobility Index (DEMMI), Lawton-Brody Instrumental Activities of Daily Living Scale (IADL) and six-minute walk test (6MWT). Descriptive and inferential statistics were used for data analysis with IBM SPSS 25. A p-value ≤ 0.05 were deemed statistically significant. The pilot study consisted of 12 participants (female (n=11, 91.7%), male (n=1, 8.3%) with a mean age of 65.8 (± 4.5) years, body mass index of 28 (± 4.2) kg.m² with one (8.3%) participant being a current smoker and four (33.3%) participants having a smoking history. Nine (75%) participants lived independently at home and three (25%) had caregivers. Participants reported walking (n=6, 50%), stretching exercises (n=1, 8.3%), household chores & gardening (n=2, 16.7%), biking/swimming/running (n=1, 8.3%) as physical activity preferences. Physical function findings of the sample were: mean FCI score 3 (± 1.1), DEMMI score 81.1 (± 14.9), IADL 95 (± 17.3), 6MWT 435.50 (IQR 364.75-458.50) with percentage 6MWT distance achieved 81.8% (IQR 64.4%-87.5%). A strong negative correlation was observed between 6MWT distance walked and FCI ($r = -0.729$, $p=0.007$). The majority of study participants reported incorporating some form of physical activity into their daily life as form of exercise. Most participants did not achieve their predicted 6MWT distance indicating less than optimal levels of physical function capacity. The number of comorbidities as determined by the FCI was associated with the distance that participants could walk with the 6MWT. The results of this pilot study could be used to indicate which elderly individuals would benefit most from a pre-surgical rehabilitation program. The main goal of such a program would be to improve physical function capacity as measured by the 6MWT. Surgeons could refer patients based on age and number of comorbidities, as determined by the FCI, to potentially improve surgical outcomes.

Keywords : abdominal surgery, elderly, physical function, six-minute walk test

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