

Safety Literature 28th June 2020

Boxing training in patients with stroke causes improvement of upper extremity, balance, and cognitive functions but should it be applied as virtual or real?

Ersoy C, Iyigun G. Top. Stroke Rehabil. 2020; ePub(ePub): ePub.

(Copyright © 2020, Informa - Taylor and Francis Group)

DOI 10.1080/10749357.2020.1783918 PMID 32574096

Abstract

BACKGROUND: Upper extremity hemiparesis is one of the most common post-stroke disabilities requiring rehabilitation.

OBJECTIVE: To compare the effects of virtual and real boxing training in addition to neurodevelopmental treatment on the upper extremity, balance, and cognitive functions in hemiparetic stroke patients.

METHODS: Forty hemiparetic stroke patients were assigned to either real boxing group-RBG (n=20) or virtual boxing group-VBG (n=20), for a total of 24 sessions (3 sessions/week for 8 weeks). The primary outcome was upper extremity motor ability (Wolf Motor Function Test-WMFT). The secondary outcomes were arm-hand dexterity (Manual Dexterity Test-MMDT), goal-oriented performance (Video Boxing Analysis-VBA), balance functions (Fullerton Advanced Balance Scale-FAB-T), and cognitive functions (Addenbrooke's Cognitive Examination-Revised-ACE-R).

RESULTS: There was small treatment effect on ACE-R, small-medium effect for WMFT and MMDT and large effect on bilateral punching time [VBA (Cohen's d- VBG=0.83; RBG=0.95)] and balance [FAB-T (Cohen's d - VBG=0.89; RBG=0.82)] after treatment in both groups. No significant differences were found for training effects between the groups for upper extremity functions [WMFT (p=0.799; Cohen's d=-0.07), MMDT-PT (p=0.327; Cohen's d=-0.10), MMDT-THTPT (p=0.779; Cohen's d=-0.17) and VBA bilateral punch number (p=0.068; Cohen's d=0.15)], balance functions [FAB-T (p=0.602; Cohen's d=-0.19)] and cognitive functions [ACE-R total (p=0.947, Cohen's d=0.09)].

CONCLUSION: The study showed that virtual and real boxing training methods, in addition to neurodevelopmental treatment, are effective in improving upper extremity, balance, and cognitive functions in patients with hemiparetic stroke. The training effects were higher on bilateral punching time and balance functions for both groups. There was no superiority of either approach.

Language: en

Keywords

postural balance; virtual reality; Stroke; boxing; cognitive functions; upper extremity functions

Circumstances around falls in older adults with cancer

Tomczak U, Sattar S, Schoenbeck KL, Cordner T, Wildes TM. *J. Geriatr. Oncol.* 2020; ePub(ePub): ePub.

(Copyright © 2020, Elsevier Publishing)

DOI 10.1016/j.jgo.2020.06.001 PMID 32576521

Abstract

OBJECTIVES: Falls are increasingly worrisome to older adults with cancer due to the side effects of cancer and its treatments. Understanding the circumstances of falls is important in the development of fall prevention strategies. The aim of this study is to understand the circumstances of falls in older patients with cancer.

MATERIALS AND METHODS: This study is a secondary analysis of a prospective cohort study in which adults aged ≥ 65 years with cancer receiving systemic cancer therapy were followed for fall outcomes for six months. Falls were assessed by monthly fall calendars; 51 participants who reported a fall were interviewed regarding the fall.

RESULTS: The cohort had an average age of 72.2 ± 5.2 years; 37% were female and 90% were white. Half (25/51) had experienced falls in the six months prior to enrollment. During the follow-up period, 78 falls occurred in 51 individuals over 6 months: 36 patients had 1 fall, 9 patients had 2 falls, 3 had 3 falls, and 1 each had 4, 5, or 6 falls. Nearly half of falls (51%) took place in the home and 38 (49%) occurred outside of the home.

CONCLUSIONS: Falls occurred at similar rates both inside the home and outside the home, indicating that familiarity with the person's surroundings does not protect against falls. Symptoms of cancer treatments were not mentioned during fall assessment, which may indicate a need for more awareness of the side effects of cancer medications and future developments of fall prevention methods.

Language: en

Keywords

Elderly; Accidental falls; Cancer

Differences in the risk of severe falls between patients aged <65 years and patients aged ≥65 years at a psychiatric hospital based on 12-year incident reports

Suga S, Tanimoto C, Yayama S, Suto S, Matoba K, Sugikado T, Makimoto K. *Perspect. Psychiatr. Care* 2020; ePub(ePub): ePub.

(Copyright © 2020, John Wiley and Sons)

DOI 10.1111/ppc.12565 PMID 32567095

Abstract

PURPOSE: This study compared age differences in risk factors for falls requiring treatment in psychiatric patients.

DESIGN AND METHODS: An incident database was used to compare fall incidents in patients aged less than 65 years and those aged greater than or equal to 65 years.

FINDINGS: Approximately 30% of fallers were less than 65 years. Mental status and medication were the main risk factors. Decreased activities of daily living were associated with the most falls in patients greater than or equal to 65 years.

PRACTICE IMPLICATIONS: Fall risk differed between the two age groups. Medication may play a major role in falls among patients less than 65 years.

Language: en

Keywords

accidental falls; age; risk factors; hospitals; qualitative research; psychiatric

Epidemiology of fall and its socioeconomic risk factors in community-dwelling Korean elderly

Kim T, Choi SD, Xiong S. PLoS One 2020; 15(6): e0234787.

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DOI 10.1371/journal.pone.0234787 **PMID** 32559206

Abstract

Although falls in older people are a major public health problem globally, to date there are scarce reports on socioeconomic risk factors for falls. The aim of the present study was to investigate the epidemiology of fall, its associated socioeconomic risk factors and relative importance among community-dwelling Korean elderly. Secondary analysis of national survey data with 31,684 community-dwelling Korean elderly was performed. Eleven socioeconomic factors (age, gender, household type, marital status, education level, current occupation, past occupation, income, wealth, number of children, and relationship satisfaction) were selected for analysing their associations with the epidemiology of fall through complex sample analysis and logistic regressions.

RESULTS showed that 15.9%~25.1% of community-dwelling Korean elderly experienced fall yearly. The groups with significantly higher fall risks were identified as older aged, being female, not married or widowed, less educated, unemployed, and having lower relationship satisfaction. Gender (adjusted odds ratio-AOR = 1.548) and relationship satisfaction (AOR = 1.276) were the utmost important fall risk factors, indicating being older female with lower relationship satisfaction were the foremost socioeconomic characteristics for risk of falling. These findings could contribute to better understanding of the socioeconomic fall risk profiles among Korean elderly and effective strategies for fall prevention.

Language: en

Fall-related injuries for three ages groups - analysis of Swedish registry data 1999-2013

Ekbrand H, Ekman R, Thodelius C, Möller M. J. Saf. Res. 2020; 73: 143-152.

(Copyright © 2020, U.S. National Safety Council, Publisher Elsevier Publishing)

DOI 10.1016/j.jsr.2020.02.016 PMID 32563386

Abstract

INTRODUCTION: The objective of this study was to analyze which factors (including factors pertaining to the individual, the household, and the local area) increase the risk of fall injuries for the three age groups with the highest risk for fall injuries in Sweden.

METHOD: The study combined longitudinal data covering the period 1999-2013 from several different official registries from Statistics Sweden as well as from the Swedish health care system and fitted the models to data using mixed model regressions.

RESULTS: Three age groups had a markedly heightened risk for fall injuries: 1-3-year olds, 12-14 year olds, and the elderly (65+). The home was the most common location for fall injuries, as about 40% of all fall injuries occur in the home. Only for the elderly strong predictors for fall injuries were found, and these were: age, single household, and special housing.

CONCLUSIONS: There is preventive potential in the special residences for the elderly and disabled. People living in these special residences make up a strongly selected group that needs extra safe environments. Our findings indicate that their needs are currently not met. Practical applications: Design of special residences for the elderly and disabled should aim at reducing the consequences of falling.

Language: en

Keywords

Fall injuries; Geographical differences; Residence; Risk groups; Socio-economic factors

Frailty status and increased risk for falls: the role of anticholinergic burden

Naharci MI, Tasci I. Arch. Gerontol. Geriatr. 2020; 90: e104136.

(Copyright © 2020, Elsevier Publishing)

DOI 10.1016/j.archger.2020.104136 PMID 32563737

Abstract

PURPOSE OF THE STUDY: Frailty leads to serious adverse outcomes including falls. The relationship between frailty and falls has not been evaluated in the context of the side effects of drugs with anticholinergic properties. The aim of this study was to examine the potential association of anticholinergic burden (ACB) with the risk of falls among frail older adults.

DESIGN AND METHODS: Community-dwelling older adults were consecutively selected from the geriatrics outpatient clinic. Based on a fall history in the last 12 months, the participants were grouped as fallers and non-fallers. Frailty status was assessed by Fried's phenotype method. Exposure to anticholinergic medications was estimated using the ACB scale, and the participants were classified into ACB_0 (none), ACB_1 (possible) and ACB_2+ (definite).

RESULTS: The study included 520 older adults (mean age 77.7 years, 62.7 % female), with a fall prevalence of 25.8 % 12 months past. The proportions of frailty and pre-frailty were 33.1 % and 57.4 %, respectively. After adjustment for study confounders, receiving at least 1 drug with either possible or definite anticholinergic properties was independently associated to falls in frail [OR = 3.84 (1.48-9.93), $p = 0.006$] and pre-frail participants [OR = 2.71 (1.25-5.89); $p = 0.012$], but not in robust subjects. Moreover, ACB was significantly associated with the frailty components on adjusted analysis (p 's < 0.05).

IMPLICATIONS: Current study showed that the use of any drugs with possible or definite anticholinergic properties was associated with an increased risk of falls in frail older adults. The results emphasize the importance of medication management with respect to fall prevention in these patients.

Language: en

Keywords

Falls; Frailty; Anticholinergics

Hip fractures are preventable: a proposal for osteoporosis screening and fall prevention in older people

Kwok TCY, Law SW, Leung EMF, Choy DTK, Lam PMS, Leung JCS, Wong SH, Ip TP, Cheung CL. *Hong Kong Med. J.* 2020; 26(3): 227-235.

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DOI 10.12809/hkmj198337 **PMID** 32554817

Abstract

[Abstract unavailable]

Language: en

Impact of altering data granularity levels on predictive modelling: a case study of fall risk prediction in older persons

Dormosh N, Abu-Hanna A, van der Velde N, Schut M. *Stud. Health Technol. Inform.* 2020; 270: 257-261.

(Copyright © 2020, IOS Press)

DOI 10.3233/SHTI200162 **PMID** 32570386

Abstract

Classification systems are widely used in medicine for knowledge representation. The hierarchical relationships between concepts in a classification system can be exploited in prediction models by looking for the optimal predictive granularity level. In this study, we used the Anatomical Therapeutic Chemical (ATC) classification system to cluster medications in the context of predicting medication-related falls in older persons. We compared the performance of fall risk prediction by describing medications at varying granularity levels of the ATC classification system. We found that the level of abstraction significantly affects the predictive performance in terms of both discrimination (measured by the receiver operating characteristic curve AUC-ROC) and calibration. An implication of these findings to the researchers is that data representation at different granularity levels can influence the predictive performance. The optimal granularity level can be determined by experimentation.

Language: en

Keywords

prediction; classification system; data abstraction; feature selection; granularity; hierarchy

Incidence, persistence and risk factors of fear of falling in older adults: cohort study (2008-2013) in Rio de Janeiro, Brazil

Drummond FMM, Lourenço RA, Lopes CS. Rev. Saude Publica 2020; 54: e56.

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DOI 10.11606/S1518-8787.2020054001939 **PMID** 32556022

Abstract

OBJECTIVE: To evaluate the incidence and persistence of fear of falling in older adults and the clinical/functional, psychosocial and lifestyle-related risk factors.

METHODS: A longitudinal study with 393 community-dwelling older adults aged 65 years and over (110 men/ 283 women) resident in the North Zone of the city of Rio de Janeiro, Brazil. The fear of falling was assessed by the Falls Efficacy Scale-I-BR. The explanatory variables assessed were: number of comorbidities and medicines, history of falls, fracture from falling, use of walking aids, functional dependence in basic and instrumental activities of daily living, hearing and visual impairment, hand grip strength, walking speed, self-rated health, body mass index, depressive symptoms, cognitive impairment, living alone and activity level. Incidence, persistence and risk factors were estimated. Multivariate analysis was performed using Poisson Regression, obtaining relative risks (RR) and corresponding to 95% confidence intervals.

RESULTS: Among the 393 participants, fear of falling occurred in 33.5% and was persistent in 71.3%. Incidence was found to associate with using seven or more medicines and reporting worse activity level than the prior year. Risk factors for persistent fear were: using seven or more medicines, a history of one or two falls, reduced walking speed, hearing impairment, cognitive impairment, depressive symptoms and poor or very poor self-rated health.

CONCLUSION: Fear of falling is a frequent and persistent condition. Many factors related to persistent fear showed no association with the incidence of fear, emphasizing the need for focused strategies to reduce risk factors that may be associated with the chronification of fear of falling.

Language: en

Participant expectations and experiences of a tailored physiotherapy intervention for people with Parkinson's and a history of falls

Rowell A, Ashburn A, Fitton C, Goodwin VA, Hulbert S, Lamb SE, McIntosh E, Nieuwboer A, Pickering R, Rochester L, Chivers-Seymour K, Ballinger C. *Disabil. Rehabil.* 2020; ePub(ePub): ePub.

(Copyright © 2020, Informa - Taylor and Francis Group)

DOI 10.1080/09638288.2020.1779824 **PMID** 32573284

Abstract

PURPOSE: People with Parkinson's are twice as likely to fall as older people within the general population. This longitudinal qualitative study was part of a larger programme of research including a randomised controlled trial to test the effectiveness of a tailored physiotherapy intervention. Specific qualitative aims focused on a subsample of trial participants in the intervention arm of the trial, and comprised the following: To explore the expectations of participants about the intervention. To investigate participants' experiences of the intervention, and its perceived impacts. To understand the facilitators and barriers to engagement.

METHODS: Two semi-structured interviews were completed with a theoretical sample of people with Parkinson's from the intervention arm, initially after randomisation but before the intervention commenced, and then again six months later.

RESULTS: Forty-two participants out of a large clinical trial were interviewed initially, with 37 agreeing to a second interview at six months. Prior experience of rehabilitation plus information accessed through the trial consent procedure informed participants' realistic expectations. Most found the level of the intervention acceptable, and perceived a range of benefits. However, views about equipment provided were more equivocal. The biggest barriers to participation were time and motivation, whilst social support facilitated engagement with the intervention.

CONCLUSIONS: This study is the first to capture expectations about participation in a programme of exercises and strategies. It highlights that previous challenges to engagement in physical exercises and activities are not a barrier to future participation and provides new insights into the role of equipment and technology in programmes of physical activity for people with Parkinson's. The challenge of ensuring that programmes of exercise and strategies become an embedded feature of everyday life is highlighted, particularly alongside busy social engagements and leisure pursuits. Implications for rehabilitation For people with Parkinson's, a programme of exercises and strategies has the potential to reduce the risk of falls amongst those with a history of falling. Adherence to such programmes can prove challenging for a variety of reasons, even when participants have realistic expectations about the commitment and effort needed. Clear explanations about the role of equipment and technology within such programmes could enhance adherence. In order to further individualise programmes of exercise for people with Parkinson's, choice regarding social support, reminders and integration into everyday activities should be explored.

Language: en

Keywords

barriers; qualitative research; adherence; expectations; experiences; facilitators; falls prevention programmes; Parkinson's

Perceived neighborhood and fall history among community-dwelling older adults living in a large Brazilian urban area: a multilevel approach

Moreira BS, Andrade ACS, Xavier CC, Proietti FA, Braga LS, Friche AAL, Caiaffa WT. *Int. J. Environ. Health Res.* 2020; ePub(ePub): ePub.

(Copyright © 2020, Informa - Taylor and Francis Group)

DOI 10.1080/09603123.2020.1782354 **PMID** 32568556

Abstract

Few studies have examined the neighborhood features related to falls in the older population in low-and-middle-income countries, including Brazil. This study aimed to evaluate if perceived neighborhood features are related to falls among older Brazilian adults living in a large urban area. This cross-sectional study was conducted using data from 834 participants (≥ 60 years) from a multistage household survey in Belo Horizonte, Brazil. The association between fall history in the previous year and perceived neighborhood features (quality of services, physical and social disorder, and safety) was examined using multilevel logistic regression. The fall prevalence was 13.6%. Older adults living in neighborhoods with a higher physical disorder were more likely to report fall in the previous year, even after controlling for demographic, clinical and social variables (OR = 2.59; 95% CI = 1.14-5.87). The other neighborhood features investigated were not associated with a fall history. Our findings suggest that improving the physical environment represents an important strategy to prevent falls in the Brazilian urban older population.

Language: en

Keywords

aged; Falls; multilevel analysis; urban health; neighbourhood

Pilot study on the effects of an adapted physical activity program focused on the quality of life and risk indicators for falls in independent dwelling-women over 65 years

de Battista M, Goncalves A, Martinez C, Strubel D, Charbonnier E. *Geriatr. Psychol. Neuropsychiatr. Vieil.* 2020; 18(2): 205-212.

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Univ. Nîmes, EA7352 CHROME/APSY-V, Nîmes, France.

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DOI 10.1684/pnv.2020.0859 **PMID** 32554352

Abstract

Falls can have multiple detrimental consequences in the elderly, and this is particularly relevant for women. To prevent the risk of falling, intervention programmes based on physical exercises focusing on balance appear to be the most efficient, which explains the multiplication of this type of action at the local level. However, these actions are very rarely evaluated.

METHODS: Our sample consists of 26 women (75.0 ± 6.7 years old), randomly assigned to two groups: an intervention group (GI) that has benefited from a balance-oriented adapted physical activity (APA) program focused on balance and conducted in an associative structure; and a control group (GC). Our study aims to evaluate different parameters such as physical (functional mobility, balance), subjective (balanced confidence) and health (quality of life) indicators in women over 65 years of age, living independently at home.

RESULTS: In people completing the program, we observed an improvement in equilibrium capabilities (significant increase in POMA score; $p < 0.05$), in balance and functional mobility (significant decrease in TUG score; $p < 0.01$) and in balance confidence (significant increase in ABC-S; $p < 0.05$).

CONCLUSION: The implementation of a short programme by the associative structure seems to be an interesting approach for the prevention of falls in autonomous elderly women.

Language: en

Keywords

balance; elderly; falls; prevention

Randomised controlled trial assessing the effect of a technology-assisted gait and balance training on mobility in older people after hip fracture: study protocol

Maranesi E, Riccardi GR, Lattanzio F, Di Rosa M, Luzi R, Casoni E, Rinaldi N, Baldoni R, Di Donna V, Bevilacqua R. *BMJ Open* 2020; 10(6): e035508.

(Copyright © 2020, BMJ Publishing Group)

DOI 10.1136/bmjopen-2019-035508 **PMID** 32546491

Abstract

INTRODUCTION: Deficits in balance and walking ability are relevant risk factors for falls during ageing. Moreover, falls are a risk factor for future falls, strongly associated with adverse health outcomes, such as fear of falling or fractures, particularly, hip fracture. For this reason, the development of prevention tools and innovative rehabilitation strategies is one of the main objectives in geriatrics. Effective interventions to promote hip recovery after hip fracture are characterised by intensive and repetitive movements. One treatment approach is to increase the number of steps during the rehabilitation sessions and to improve the balance and the endurance of the patients in the use of technological devices.

METHODS AND ANALYSIS: This randomised controlled trial aimed to evaluate an innovative rehabilitation treatment of elderly patients with hip fractures. A total of 195 patients with hip fractures will be recruited and randomly divided into three groups: traditional rehabilitation programme, traditional rehabilitation programme plus TYMO system and traditional rehabilitation programme plus Walker View. Assessments will be performed at baseline, at the end of treatment, at 6 months, and at 1 and 2 years after the end of the treatment. Only subjects hospitalised 4 weeks prior to the beginning of the study will be taken into consideration. Twenty treatment sessions will be conducted, divided into three training sessions per week, for 7 weeks. The technological intervention group will carry out 30 min sessions of traditional therapy and 20 min of treatment with a technological device. The control group will perform traditional therapy sessions, each lasting 50 min. The primary outcomes are risk of falling, gait performance and fear of falling.

ETHICS AND DISSEMINATION: The study was approved by the Istituto di Ricerca e Cura a Carattere Scientifica, Istituto Nazionale Ricovero e Cura Anziani Ethics Committee, with identification code number 19 014. Trial results will be submitted for publication in journals and conferences.

TRIAL REGISTRATION NUMBER: NCT04095338.

Language: en

Keywords

public health; information technology; rehabilitation medicine

Relationship between lower limb muscle strength and future falls among community-dwelling older adults with no history of falls: a prospective 1-year study

Porto JM, Cangussu-Oliveira LM, Freire Junior RC, Vieira FT, Capato LL, de Oliveira BGM, de Abreu DCC. *J. Appl. Gerontol.* 2020; ePub(ePub): ePub.

(Copyright © 2020, SAGE Publishing)

DOI 10.1177/0733464820932778 **PMID** 32546083

Abstract

OBJECTIVE: To investigate whether lower limb muscle strength could be a risk factor for the first fall among nonfaller community-dwelling older adults.

METHOD: Hip, knee, and ankle peak torque (PT) was measured with an isokinetic dynamometer in 101 older adults with no history of falls in the previous year. Next, the authors followed up the participants on a monthly basis by telephone contact to determine the occurrence of fall episodes over a period of 1 year. Multivariate logistic regression adjusted for confounding variables was applied to assess the relationship between falls and lower limb PT.

RESULTS: there was no association between lower limb PT and future falls ($p > .05$).

CONCLUSION: Based on these results, it is important to identify other factors that predispose older adults with no history of falls to falling for the first time, so that early and effective preventive strategies may be elaborated.

Language: en

Keywords

prevention; risk factors; falls; first fall; muscle weakness; nonfallers

Subjective hearing difficulty and fall risk

Criter RE, Gustavson M. Am. J. Audiol. 2020; ePub(ePub): ePub.

(Copyright © 2020, American Speech-Language-Hearing Association)

DOI 10.1044/2020_AJA-20-00006 PMID 32569474

Abstract

PURPOSE Hearing loss is a risk factor for falls. The purpose of this study was to investigate the relation between subjective hearing difficulty and risk of falls.

METHOD Community-dwelling older adults, aged 60 years and older, completed a case history; three questionnaires, including the Hearing Handicap Inventory for the Elderly (HHIE), Dizziness Handicap Inventory (DHI), Activities-Specific Balance Confidence Scale (ABC); and one functional balance measure, the Timed Up and Go (TUG) test. Pearson and Spearman correlations were calculated, and average scores were plotted according to group and HHIE score category for DHI, ABC, TUG, the number of medications, and the number of recent falls.

RESULTS Seventy-four participants were included in this analysis: 28 nonaudiology patients, 18 audiology patients with hearing aids, and 28 audiology patients without hearing aids. Significant positive correlations were noted between HHIE and DHI scores for audiology patients without hearing aids and between HHIE score and number of recent falls for audiology patients with hearing aids. When average scores were plotted for DHI, ABC, TUG, the number of medications, and the number of recent falls according to group and category, there were clear trends toward increased fall risk as HHIE score categories increased (i.e., mild to moderate to severe) based on previously used criteria.

CONCLUSIONS Overall, a trend was noticed such that, for increasing HHIE score categories, fall risk increased. Significant correlations existed between HHIE score and some of the measures used to indicate fall risk (i.e., DHI score, number of recent falls). Future fall risk research should investigate subjective hearing difficulty as a risk factor, as well as pure-tone audiometric thresholds.

Language: en

The association between freezing of gait, fear of falling and anxiety in Parkinson's disease: a longitudinal analysis

Ghielen I, Koene P, Twisk JW, Kwakkel G, van den Heuvel OA, van Wegen EE. Neurodegener. Dis. Manag. 2020; ePub(ePub): ePub.

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(Copyright © 2020, Future Medicine)

DOI 10.2217/nmt-2019-0028 **PMID** 32552383

Abstract

Aim: We studied the longitudinal associations between freezing of gait (FoG), fear of falling (FoF) and anxiety, and how these associations are influenced by confounding factors. **Materials & methods:** We analyzed longitudinal motor and nonmotor measurements from 153 Parkinson's disease patients. Possible confounding factors were divided into three subgroups: demographics, disease characteristics, medication use and adverse effects of medication. **Results:** All crude associations between FoG, FoF and anxiety were significant and remained so after adjusting for confounders. When analyzing FoF and anxiety together as independent variables, the association between FoG and FoF remained, and the association between FoG and anxiety diminished. **Conclusion:** We confirm the complex interactions between motor and nonmotor symptoms in Parkinson's disease, and plead for a multidisciplinary approach.

Language: en

Keywords

Parkinson's disease; anxiety; fear of falling; freezing of gait; multidisciplinary; neuropsychiatry; symptom interaction

Falls from height: orthopaedic and psychiatric evaluation

Faggiani M, Aragno E, Aprato A, Rosso G, Conforti LG, Maina G, Masse A. *Acta Biomed. Ateneo Parmense* 2020; 91(4-S): 79-84.

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(Copyright © 2020, Societa di Medicina e scienze naturali di Parma)

DOI 10.23750/abm.v91i4-S.9366 **PMID** 32555080

Abstract

BACKGROUND: Fall from a height is one of the major causes of significant trauma with high morbidity and mortality rates. Traumatological damage control is often the primary treatment both for suicide attempt survivors and for accidental fall victims, but management of the hospitalization of psychiatric patients requires more resources than other patients.

METHODS: Retrospective multidisciplinary study (psychiatric and orthopaedic evaluation) and analysis of psychiatric and trauma characteristics of patients fallen from height admitted to our trauma centre. We analysed patterns of patients after suicidal jumps and accidental falls to look for possible trends that may trigger projects for further improvement of care.

RESULTS: 205 patients were analysed, 137 were included: 65 suicide attempt survivors and 72 accidental fall victims. Between these two groups there are no differences about the anaesthesiologic acute management or the number of damage control procedures. However, the psychiatric patients stay longer in hospital especially in intensive care unit with prolonged intubation ($p < 0.001$). Suicide attempt survivors are significant correlated with fractures of feet, but the orthopaedic lesions do not involve an increase of definitive interventions ($p < 0.05$).

CONCLUSION: We showed that the suicide attempt survivors and accidental victims need the same acute management. The orthopedic definitive surgical procedures are similar between the two groups, but in spite of this patients with psychiatric disorder were associated with a statistically significant increase of care in intensive care unit and hospitalization. Our results allow to create a new multidisciplinary approach for these patients.

Language: en

Perspectives of inpatients with cancer on engagement in fall prevention

Twibell KR, Siela D, Delaney L, Ávila P, Spradlin AM, Coers G. *Oncol. Nurs. Forum* 2020; 47(4): 457-468.

Affiliation

Indiana University Health Ball Memorial Hospital.

(Copyright © 2020, Oncology Nursing Society)

DOI 10.1188/20.ONF.457-468 PMID 32555560

Abstract

PURPOSE: To explore perspectives of hospitalized adults with cancer regarding engagement in fall prevention plans. The primary aim was to discover new knowledge about patients' perspectives and improve the design of fall prevention strategies. A secondary aim was to compare fall-related perspectives of patients who had and who had not fallen.

PARTICIPANTS & SETTING: 30 inpatients with cancer at a teaching hospital in a statewide academic health system in the midwestern United States.

METHODOLOGIC APPROACH: A descriptive exploratory approach framed qualitative data collection through interviews with inpatients. Data were analyzed thematically.

FINDINGS: Themes reflected six perspectives related to engagement in fall prevention. A need to go to the bathroom triggered a two-step process in which participants decided whether to ask staff for assistance to mobilize and to wait for assistance to arrive. If necessary, participants would disengage from fall prevention plans and move to the bathroom without assistance to avoid incontinence, preserve privacy, and maintain independence in toileting. Factors influencing decisions were assessments of mobilization capacity and views of nurses' behaviors. **IMPLICATIONS FOR NURSING:** Nurses can foster patient engagement in fall prevention by developing trusting, authentic relationships with at-risk patients, involving patients in assessing their own fall risk, and tailoring toileting plans to ensure continence.

Language: en

Keywords

cancer; fall prevention; hospitalization; inpatient; qualitative

Perspectives of inpatients with cancer on engagement in fall prevention

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Language: en

Keywords

cancer; fall prevention; hospitalization; inpatient; qualitative

Statin use and fall-related hospitalizations among residents of long-term care facilities: a case-control study

Wang KN, Bell JS, Tan EC, Gilmartin-Thomas JF, Dooley MJ, Ilomäki J. *J. Clin. Lipidol.* 2020; ePub(ePub): ePub.

(Copyright © 2020, Elsevier Publishing)

DOI 10.1016/j.jacl.2020.05.008 PMID 32571729

Abstract

BACKGROUND: Statins are associated with muscle-related adverse events, but few studies have investigated the association with fall-related hospitalizations among residents of long-term care facilities (LTCFs).

OBJECTIVE: The objective of the study is to investigate whether statin use is associated with fall-related hospitalizations from LTCFs.

METHODS: A case-control study was conducted among residents aged ≥ 65 years admitted to hospital from 2013 to 2015. Cases ($n = 332$) were residents admitted for falls and fall-related injuries. Controls ($n = 332$) were selected from patients admitted for reasons other than cardiovascular and diabetes. Cases and controls were matched 1:1 by age (± 2 years), index date of admission (± 6 months), and sex. Adjusted odds ratios (aORs) and 95% confidence intervals (CIs) were estimated using conditional logistic regression, after considering for history of falls, hypertension, dementia, functional comorbidity index, polypharmacy (≥ 9 regular preadmission medications), and fall-risk medications. Subanalyses were performed for individual statins, dementia, and statin intensity.

RESULTS: Overall, 43.1% of cases and 27.1% of controls used statins. Statins were associated with fall-related hospitalizations (aOR = 2.24, 95% CI 1.56-3.23), in particular simvastatin (aOR = 2.26, 95% CI 1.22-4.20) and atorvastatin (aOR = 2.08, 95% CI 1.33-3.24). Statins were associated with fall-related hospitalizations in residents with (aOR = 2.34, 95% CI 1.33-4.11) and without dementia (aOR = 2.30, 95% CI 1.46-3.63). There was no association between statin intensity and fall-related hospitalizations (aOR = 0.78, 95% CI 0.43-1.40).

CONCLUSION: This study suggests a possible association between statin use and fall-related hospitalizations among residents living in LTCFs. However, there was minimal evidence for a relationship between statin intensity and fall-related hospitalizations. Further research is required to substantiate these hypothesis-generating findings.

Language: en

Keywords

Hospitalization; Falls; Statins; Long-term care; Nursing homes

The association of basic and challenging motor capacity with mobility performance and falls in young seniors

Gordt K, Paraschiv-Ionescu A, Mikolaizak AS, Taraldsen K, Mellone S, Bergquist R, Van Ancum JM, Nerz C, Pijnappels M, Maier AB, Helbostad JL, Vereijken B, Becker C, Aminian K, Schwenk M. Arch. Gerontol. Geriatr. 2020; 90: e104134.

(Copyright © 2020, Elsevier Publishing)

DOI 10.1016/j.archger.2020.104134 PMID 32575015

Abstract

BACKGROUND: Understanding the association between motor capacity (MC) (what people can do in a standardized environment), mobility performance (MP) (what people actually do in real-life) and falls is important for early detection of and counteracting on functional decline, particularly in the rapidly growing population of young seniors. Therefore, this study aims to 1) explore the association between MC and MP, and between MC and falls, and 2) investigate whether challenging MC measures are better associated with MP and falls than basic MC measures.

METHODS: Basic (habitual gait speed, Timed Up-and-Go) and challenging (fast gait speed, Community Balance & Mobility Scale) MC measures were performed in 169 young seniors (61-70 years). MP was assessed using one-week sensor-monitoring including time being sedentary, light active, and at least moderately active. Falls in the previous six months were reported. Associations and discriminative ability were calculated using correlation, regression and receiver operating curve analysis.

RESULTS: Mean age was 66.4 (SD 2.4) years (50.6 % women). Small to moderate associations ($r = 0.06-0.31$; $p < .001-.461$) were found between MC, MP and falls. Challenging MC measures showed closer associations with MP and falls ($r = 0.10-0.31$; $p < .001-.461$) compared to basic ($r = 0.06-0.22$; $p = .012-.181$), remained significant in three out of four regression models explaining 2.5-8.6 % of the variance, and showed highest discriminative ability (area under the curve = 0.59-0.70) in all analyses.

CONCLUSIONS: Challenging MC measures are closer associated with mobility performance and falls as compared to basic MC measures in young seniors. This indicates the importance of applying challenging motor capacity assessments in young seniors. On the same note, small to moderate associations imply a need for an assessment of both MC and MP in order to capture the best possible MC and the actual daily-life MP in young seniors.

Language: en

Keywords

Aged; Physical activity; Falls; Gait