Abstract:
In this epidemiological study we described the characteristics of spatio-temporal gait parameters among a representative, population-based sample of 890 community-dwelling people aged 65 to 90 years. In addition, we investigated the associations between certain gait parameters and a history of falls in study participants. In descriptive analyses spatio-temporal gait parameters were assessed according to history of falls, frailty, multimorbidity, gender, multiple medication use, disability status, and age group. Logistic regression models were calculated to examine the association between gait velocity and stride length with a history of falls (at least one fall in the last 12 months). Data on gait were collected on an electronic walkway on which participants walked at their usual pace. We found significant differences within gait parameters when stratifying by frailty, multimorbidity, disability and multiple medication use as well as age (cut point 75 years) and sex, with p<0.05 for all gait parameters (velocity, cadence, time, stride duration, stride length, step width). After stratification by history of falls, only stride length showed a significant difference (p<0.05) between the groups of fallers and non-fallers. Logistic regression models showed that a decreased stride length was independently
associated with falls in men aged older than 74 years (OR 1.34 (CI: 1.05-1.70 per 10 cm decrease)), while this was neither the case for women of similar age nor for men or women aged 65 to 74 years. A decreased walking speed was not associated with falls. Age, frailty, multimorbidity, disability, history of falls, sex, and multiple medication use show an association with different gait parameters measured during gait assessment on an electronic walkway in elderly people. Furthermore, stride length is a good indicator to differentiate fallers from non-fallers in older men from the general population.

Zeitschriftentitel / Abkürzung:
BMC Geriatr

Jahr: 2015
Band: 15
Seiten: 32
Sprache: eng


TUM Einrichtung:
Institut für Medizinische Statistik und Epidemiologie

Occurences:
- Einrichtungen > Fakultäten > Fakultät für Medizin > Kliniken und Institute > Institut für Medizinische Statistik und Epidemiologie > 2015

entries: