

9th International Conference on

ALZHEIMER'S DISEASE & DEMENTIA

October 16-18, 2017 | Rome, Italy

The risk of fall by dementia, comorbidities and sedative medicines among home-dwelling older people in Denmark - A Danish register-based case-control study

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Dementia as a risk factor for fall is relatively well studied among hospitalized/ institutionalized but not among home-dwelling older people on a national level. Additionally, comorbidities and sedative medicines as common coexisting components in people with dementia for excess risk of falling are also lacking. We therefore conducted a population- and register-based case-control study among older people in Denmark (65+). Cases were individuals with a first time fall in 2009-2014, and matched with age, sex, and municipality with six controls. We excluded those who had fall in 2008, and/or lived in a nursing home at the beginning year of the index time. Dementia, comorbidity, and sedative medicines were ICD-10 codes or ATC-codes linked from the national registers. A history of fall was extracted from the national accident register and supplemented with hospital emergency room register. Of 115,590 cases and 693,540 controls, adjusted for education, marriage and comorbidities, our preliminary results showed that dementia had a 1.83-fold higher risk of falling [OR=1.83, 95%CI (1.78-1.88), $p<0.001$]. Additionally, among people with comorbidities coexisting with dementia, a tendency of decreasing risk trend along the number of comorbidities (0, 1, 2, ≥ 3) was observed (OR=1.98, 1.90, 1.63, 1.56 resp.). Among people with sedative medicines (0, 1, ≥ 2), a similar decreasing fall risk trend was also observed (OR=1.97, 1.94, 1.74 resp.). Dementia is a significant risk factor for home-dwelling older people in Denmark. The increasing number of comorbidities and sedative medicines may potentially limit the frequency of patients' daily activities and subsequently decreasing the risk of falls.

Biography

Jindong Ding Petersen is current a PhD student from University of Southern Denmark, and is expected to complete her PhD in December 2018. She has published 3 papers in Epidemiology study field.

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