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Studies have addressed the prevalence of geriatric syndromes during hospitalization and showed their association with adverse outcomes. However, data on their course post-discharge and association with recovery are scarce. This study assessed the course of geriatric syndromes from admission until discharge and then monthly until three months post-discharge and their impact on functional decline, readmission, and mortality. A multi-center cohort study, the Hospital-Associated Disability and Impact on Daily Life (Hopital-ADL) study, was conducted, including 400 acutely hospitalized patients aged ≥70 years admitted to an internal, cardiology or geriatric ward from 6 Dutch hospitals. Geriatric syndromes that were assessed included: fatigue; malnutrition; fall risk; fear of falling; shortness of breath; incontinence; pain; dizziness; depressive symptoms; cognitive impairment. 80% of patients experienced fatigue at admission, which remained present among 50% up to three months post-discharge. 40% were malnourished at admission, and still 20–30% in the first three months post-discharge. Almost 40% experienced a fall six months prior-hospitalization, and 11–12% had a fall in the first, second and third month respectively. 40% were afraid to fall at admission, 30% in the first months post-discharge. 15–35% experienced shortness of breath, incontinence, pain and dizziness during and post-hospitalization. 22% experienced depressive symptoms at admission, 11% post-discharge. 20% was cognitive impaired at admission, which decreased to 11% post-discharge. At hospital admission and post-discharge, depressive symptoms, malnutrition, fear of falling, shortness of breath and pain were associated with functional decline, readmissions and mortality. Hence, our study underpins the importance of addressing geriatric syndromes in transitional care interventions.

DEVELOPMENT OF A MEDICATION ADHERENCE SCALE FOR ELDERLY PATIENTS WITH CHRONIC DISEASE

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Objectives: This study was to develop a scale to evaluate medication adherence in elderly patients with chronic disease and to examine validity and reliability of the scale. Methods: The development process for the preliminary scale included construction of a conceptual framework by concept analysis and initial items, verification of content analysis, sentence correction, and pilot study. This study was conducted using a questionnaire survey with one-to-one interviews during October, 2016. Participants were 345 elderly patients with chronic disease. Data were analyzed using item analysis, factor analysis, criterion related validity, internal consistency, and test-retest. Results: The developed scale consisted of 18 items and 4 factors - remember of taking medication (2 items), expectations for drug effects (5 items), practice taking medication according to instructions (8 items), communicating with health professionals (3 items), and explained 69.7% of total variance. The scale had significantly positive correlation ($r = .717$, $p < .001$) with the Morisky Medication Adherence Scale (MMAS-8) of Morisky, Ang, Krousel-Wood and Ward (2008). Cronbach's alpha was .91, Guttman split half coefficient was .80, and test-retest reliability was .912. Conclusion: Results indicate that the Medication Adherence Scale for elderly patients with chronic disease has validity and reliability, and is a suitable scale in health care settings to assess the status of medication adherence in elderly patients with chronic disease.

PERSISTENT USE OF PSYCHOTROPIC DRUGS IN RESIDENTS RECEIVING LONG-TERM CARE IN NORWAY

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The prevalence of psychotropic drug (PTD) use in residents receiving long-term care (nursing home, NH) is high, but few have explored persistency in PTD use in NH residents and factors associated with persistency. This at the same time as we know that risk of side events may be higher with long-term use in older adults. Thus, the aim of this study was to describe the prevalence and persistence in use of PTD and to explore factors associated with persistency in PTD use at two consecutive time points in NH residents. Methods: We included 1163 NH residents in a 72-month longitudinal study with five assessments. Use of PTD, neuropsychiatric symptoms (NPS), severity of dementia and physical health were assessed each time. Results: The prevalence over time and persistent use of antipsychotic drugs, antidepressants, anxiolytics and sedatives at two consecutive time points were high (50–100 %) in residents with and without dementia. There was an association between greater NPS at the first time point, and persistent use of these drugs, but changes in NPS between time points, did not explain such use. A longer NH stay increased the odds for persistent use of antipsychotics. Conclusion: Psychotropic drugs are frequently used as a long-term treatment among NH residents and are associated with severity of neuropsychiatric symptoms, but not with severity of dementia. Closer attention should be paid to follow-up of psychotropic drug treatment, and especially for long–term use of antipsychotics, since the duration of such treatment should be as short as possible.

OMIC SIGNATURES IN FRAILTY AND FRAILTY DIAGNOSIS

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The forecasted increase in the number of older people for this century will be accompanied by an increase of those with disabilities. Disability is usually preceded by a condition named frailty which is still a non-reversible condition when compared with disability. Recent studies stress the relevance of testing the clinical utility of the existing definition of frailty by using combinations of clinical criteria (current definition) and lab Biomarkers (BMs).

In Frailomic we aimed to characterize, both biologically and clinically, frailty by profiling more than 30000 blood and urine derived -Omic signatures in four different European cohorts. In all cohorts, we combined the omic information with existing clinical data that included existing relevant markers such as disability, co-morbidity or depression among others.

The analysis was conducted as a three-stage workflow. In a first stage, we identified those signatures per omic type and per cohort type that were significantly associated with frailty, using a non-parametric approach that included as covariates known frailty covariates such as age or depression among others. In a second stage, we identified using Machine Learning techniques and per cohort, the minimal models of omic and non-omic signatures that better predicted frailty diagnosis. In a third stage, we investigated the robustness of the minimal models and the possible use in combination with existing clinical classifications of frailty.

As a result, we quantified the value of -omic improving the clinical definition of frailty, but also gained frailty-related functional information at the level of blood and urine metabolites and non-coding RNAs.

TRAJECTORIES OF DEPRESSIVE SYMPTOMS AND APATHY FROM HOSPITALIZATION TO THREE MONTHS POST-DISCHARGE

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Depressive symptoms and apathy are both causes for and a consequences of hospitalization among older persons. Depressive symptoms and apathy are highly heterogeneous in its course, and psychological or physical recovery may be related to distinct trajectories. These trajectories are unknown in the context of acute hospitalization and possibly important for post-hospital recovery. Therefore, the aim of this study was to identify distinct trajectories of depressive symptoms and apathy from acute hospitalization until three months post-discharge and to study the incidence of functional decline and mortality three months post-discharge in these trajectories. We conducted a multicenter prospective cohort study, the Hospital-Associated Disability and impact on daily Life (Hospital-ADL) study, including 400 acutely hospitalized patients of 70 years and above. Data were collected in six Dutch hospitals. We identified three depressive symptoms consistently trajectories among acutely hospitalized patients: 1]high level of depressive symptoms (10%), 2] moderate level of symptoms (28%), and 3]minimal symptoms (62%). Percentages of functional decline in the first, second and third group were 32%, 31%, and 12%, respectively. Mortality rates per group were 25%, 17%, and 5%, respectively. We identified three apathy trajectories: 1]consistently high level of symptoms (19%), 2]), 2]consistently moderate level (23%), and 3]moderate level of symptoms and decreasing post-discharge (15%). Percentages of functional decline were 23%, 7%, and 15% respectively. Mortality rates per group were 14%, 3%, and 0% respectively. These distinct trajectory groups of depressive symptoms and apathy provide information about the possible prognosis of these symptoms and functional recovery after an acute hospitalization.

ASSOCIATION OF OBESITY AND FRAILTY IN OLDER ADULTS: NHANES 1999–2004

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Body composition changes with aging can impact function in older adults leading to frailty. Measuring adiposity using body fat or central adiposity using waist circumference (WC) have greater diagnostic accuracy than traditional measures such as body mass index (BMI).

We identified individuals ≥60 years old using the 1999–2004 cross-sectional National Health and Nutrition Survey (NHANES). Body fat percent was assessed using dual energy x-ray absorptiometry and WC was objectively measured. Frailty was defined using an adapted version of Fried's criteria: (low BMI<18.5kg/m2; slow walking speed [<0.8m/s]; weakness [unable to lift 10lbs]; exhaustion [difficulty walking between rooms on same floor] and low physical activity [compared to others]). Robust, pre-frailty and frailty persons met zero, 1 or 2, and ≥3 criteria, respectively. The primary outcome evaluated the association between frailty and body fat or WC. Frailty was the primary predictor (robust=referent) and body fat and WC were considered continuous outcomes. Multiple imputation analyses accounted for missing characteristics.

Of the 4,984 participants, mean age was 71.1 ± 0.2 (SE) years (56.5% females). We classified 2,246 (50.4%), 2,195 (40.3%), and 541 (9.2%) individuals as robust, pre-frail and frail, respectively. Mean body fat and WC was 35.9% and 99.5cm in the robust, 38.3% and 100.1cm in pre-frail, and 40.0% and 104.7cm in frail individuals. After adjustment, pre-frailty and frailty were associated with a $\beta=0.37 \pm 0.27$,p=0.18, and $\beta=0.97 \pm 0.43$,p=0.03 for body fat and $\beta=2.18 \pm 0.64$,p=0.002, and $\beta=4.80 \pm 1.1$,p<0.001 for WC.

Geriatric obesity defined by higher body fat and high WC are associated with increasing rates of frailty when compared to robust patients.

SSRI/SNRI ANTI-DEPRESSANT INDUCED INTERSTITIAL LUNG DISEASE: A CASE SERIES AND CASE- CONTROL STUDY

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SSRI and SNRI anti-depressants are widely prescribed in the elderly population. For unknown reasons, the incidence of interstitial lung disease (ILD) is increasing in western populations. There are published case reports and references on the Pneumotox web site (www.pneumotox.com) linking SSRIs/SNRIs to development of ILD and/or airway involvement (ILD/AWI). A case of venlafaxine induced ILD/AWI led us to explored this association in more detail. We report a series of 5 cases and a case control study examining the association between SSRI/SNRI usage and presence of ILD/AWI in an elderly population. Participants were all 296 elderly people followed in a primary care geriatric practice. A chart audit of the electronic medical record was done to identify cases and controls. The case definition included chronic respiratory symptoms and presence of ILD/AWI on CT or CXR.