

## Geriatric psychiatry

### FC32

#### A quality improvement intervention in geriatric psychiatry care: Results of a pre-post design study

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**Introduction** Innovative approaches are needed to respond to the increasing number of elderly subjects with complex psychiatric conditions who require flexible and rapid responses, avoiding unnecessary hospital admissions. A new organizational model was implemented in our psychogeriatric service in September 2011 consisting of:

- a comprehensive multidisciplinary geriatric assessment;
- a helpline for caregivers for management of acute behavioral problems;
- programmed visits to nursing homes.

**Aims** To evaluate whether the implementation of this program was associated with a reduction in hospital admissions and emergency department visits.

**Methods** This is a pre-post test design study, involving 1197 patients who attended the Old Age Psychiatric (OAP) Unit three years before and three years after the implementation of the organizational intervention (1.09.2008 to 1.10.2014). An index of patient × year was calculated considering the period during which the patient was followed in OAP Unit. Data was obtained from the medical files of all eligible patients regarding demographic variables, number and type of hospital admissions and emergency department visits.

**Results** During the 3 years before the intervention 671.2 patients × years were included (mean age of 75.8 years) while after the intervention this reached 2010.1 patients × years (mean age of 77.8 years). The intervention was associated with a decrease of 44% in psychiatry emergency visits, 48% in general emergency visits, 44% in psychiatric ward admissions and 51% in geriatric ward admissions.

**Conclusions** The implementation of this new model was associated with significant reduction of hospital-based service utilization. Future research should determine if this was coupled with increased health outcomes.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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### FC33

#### Association between physical frailty and cognition in late-life depression

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**Introduction** Cognitive frailty has recently been defined as the co-occurrence of physical frailty and cognitive impairment. Late-life depression is associated with both physical frailty and cognitive impairment, especially processing speed and executive functioning.

**Aim and objectives** In this study, we investigated the association between physical frailty and cognitive functioning in depressed older persons.

**Methods** In a total of 378 patients (>60 years) with depression according to DSM-IV criteria and a MMSE score of 24 points or higher, the physical frailty phenotype as well as its individual criteria (weight loss, weakness, exhaustion, slowness, low activity) was studied. Cognitive functioning was examined in 4 domains: verbal memory, working memory, interference control, and processing speed.

**Results** Of the 378 depressed patients (range 60–90 years; 66.1% women), 61 were classified as robust (no frailty criteria present), 214 as prefrail (1 or 2 frailty criteria present), and 103 as frail (>3 criteria). Linear regression analyses, adjusted for confounders, showed that the severity of physical frailty was associated with poorer verbal memory, slower processing speed, and decreased working memory, but not with changes in interference control.

**Conclusion** In late-life depression, physical frailty is associated with poorer cognitive functioning, although not consistently for executive functioning. Future studies should examine whether cognitive impairment in the presence of physical frailty belongs to cognitive frailty and is indeed an important concept to identify a specific subgroup of depressed older patients, who need multimodal treatment strategies integrating physical, cognitive, and psychological functioning.

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### FC34

#### Association between physical frailty and inflammation in late-life depression

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**Introduction** Although the criteria for physical frailty and depression partly overlap, both represent unique, but reciprocally related constructs. The association between inflammation and frailty has been reported consistently, in contrast to the association between inflammation and late-life depression (LLD).

**Aim and objectives** To determine whether physical frailty is associated with low-grade inflammation in LLD.

**Methods** The physical frailty phenotype, defined as three out of five criteria (weight loss, weakness, exhaustion, slowness, low physical activity level), and three inflammatory markers [C-reactive protein (CRP), interleukin-6 (IL-6), and neutrophil gelatinase-associated lipocalin (NGAL)] were assessed in a sample of individuals aged 60 and older with depression according to Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, criteria ( $n = 366$ ).

**Results** The physical frailty phenotype was not associated with inflammatory markers in linear regression models adjusted for sociodemographic characteristics, lifestyle characteristics, and somatic morbidity. Of the individual criteria, handgrip strength was associated with CRP and IL-6, and gait speed was associated with NGAL. Principal component analysis identified two dimensions within the physical frailty phenotype: performance-based physical frailty (encompassing gait speed, handgrip strength, and low

physical activity) and vitality-based physical frailty (encompassing weight loss and exhaustion). Only performance-based physical frailty was associated with higher levels of inflammatory markers. **Conclusion** The physical frailty phenotype is not a unidimensional construct in individuals with depression. Only performance-based physical frailty is associated with low-grade inflammation in LLD, which might point to a specific depressive subtype.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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### FC35

#### Antidepressants and mortality risk in a dementia cohort – data from SveDem, the Swedish Dementia Registry

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**Background** The association between mortality risk and use of antidepressants in people with dementia is unknown.

**Objective** To describe the use of antidepressants in people with different dementia diagnoses and to explore mortality risk associated with use of antidepressants 3 years before a dementia diagnosis.

**Methods** Study population included 20,050 memory clinic patients from Swedish Dementia Registry diagnosed with incident dementia. Data on antidepressants dispensed at the time of dementia diagnosis and during three-year period before dementia diagnosis was obtained from the Swedish Prescribed Drug Register. Cox regression models were used.

**Results** During a median follow-up of 2 years from dementia diagnosis, 25.8% of dementia patients died. A quarter (25.0%) of patients were on antidepressants at the time of dementia diagnosis while 21.6% used antidepressants at some point during a three-year period before a dementia diagnosis. Use of antidepressant treatment for 3 consecutive years before a dementia diagnosis was associated with a lower mortality risk for all dementia disorders (HR: 0.82, 95% CI: 0.72–0.94) and in Alzheimer's disease (HR: 0.61, 95% CI: 0.45–0.83). There were no significant associations between use of antidepressant treatment and mortality risk in other dementia diagnoses.

**Conclusion** Antidepressant treatment is common among patients with dementia. Use of antidepressants during prodromal stages may reduce mortality in dementia and specifically in Alzheimer's disease.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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### FC38

#### Validity of the Geriatric Depression Scale-30 against the gold standard diagnosis of depression in older age: The GreatAGE Study

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**Introduction** Depression is a common disorder in late-life. Structured clinical interviews may be less efficient compared to self-administered questionnaires, but provide more accurate findings in terms of diagnosis. No population-based studies with both these depression assessment instruments have been ever performed.

**Objectives** To estimate the GDS-30 accuracy for depression assessment against the gold standard [Semi-structured Clinical Diagnostic Interview for DSM-IV-TR Axis I Disorders (SCID)] in subjects 65+ years in a random sampling of the general population.

**Methods** The sample was collected in a population-based study (GreatAGE) conducted among elderly residents in Castellana, Southeast Italy. It includes 597 participants (57.62% males, mean age 73 years). Depression was assessed through the GDS-30 and the SCID, both double-blinded administered respectively by a trained neuropsychologist and psychiatrist. The GDS-30 screening performances were analyzed using ROC curves.

**Results** According to the gold standard SCID, the rate of depressive disorder was 10.22% (15.81% of women; 6.1% of men) while with GDS-30 instrument 12.06% of the residents met the depression cutoff. Only 36.1% of GDS cases were true positive. At the optimal cutoff score (> 5), GDS had 62% sensitivity and 81% specificity. Using a more conservative cutoff (> 9), the GDS-30 specificity reached 91% while sensitivity dropped to 43%.

**Conclusions** These preliminary results from the first population-based study that compares GDS-30 and SCID showed that the GDS-30 identified adequate levels of screening accuracy (AUC 0.76) compatible with scores established in community settings.

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### FC39

#### Specific personality changes in subjects with MCI and mild dementia are associated with cerebral Alzheimer's pathology as measured by CSF biomarkers

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**Introduction** Specific changes in personality profiles may represent early symptoms of Alzheimer's disease (AD). Knowledge about relationship between personality changes and biomarkers of cerebral pathology can contribute to early diagnosis of AD.

**Objectives** To investigate to what extent the personality changes predict the cerebral AD pathology.