

EV0426

Memory, attention and language deficits in major depressive disorderB. Suci^{1,*}, R. Paunescu², I. Miclutia²¹ Children's Emergency Hospital- Cluj-Napoca, Romania, Psychiatry Clinic- Cluj-Napoca, Romania, Cluj-Napoca, Romania² Iuliu Hațieganu University of Medicine and Pharmacy, Department of Neurosciences, Cluj-Napoca, Romania

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Objectives For a long time, cognitive deficits were considered as part of depressive episodes and were expected to improve as other affective symptoms diminished with treatment. Because of this, cognitive impairment was rarely assessed for Major depressive disorder, but in the present time this has changed.

Methods The study included 35 patients (age between 18 and 70) diagnosed with recurrent major depressive disorder (according to ICD-10 and DSM-V) which were evaluated during an acute depressive episode. The severity of depression was quantified clinically and with the help of Hamilton Depression Rating Scale -17 items- whereas cognitive functions were evaluated with standard cognitive tests.

Results Out of the 35 patients included, 25 were female patients, the rest of 10 being represented by male participants. A median score of 81.5 seconds on the Trail Making Test part A showed attention focusing deficits when compared with standard scores. For semantic fluency, ten words represented the mean score; whereas for phonemic fluency the mean score was lower (seven words). A median score of 5 words resulted from the assessment of the verbal learning and memory, these are considered to be associated with memorization and retention of a list of words given.

Conclusions These results sustain what the majority of studies revealed, that cognitive deficits are present in all cognitive domains, mostly in attention, verbal fluency and memory.

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EV0427

Pathologies related to depression in elderly patientsJ. Batistella¹, G. Hida², D. Malheiros², G. Taniguchi Rodrigues³, F.J. Roper Peláez⁴, J. Magalhães¹, S. Taniguchi^{1,*}¹ Albert Einstein Hospital, Basic Sciences, São Paulo, Brazil² Albert Einstein Hospital, Health Economics, São Paulo, Brazil³ Centro Universitário do Estado do Pará, Faculty of Medicine, Belém, Brazil⁴ UFABC, Mathematics Computation and Cognition, Santo André, Brazil

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Introduction The occurrence of chronic diseases, motor limitation, cognitive impairment and social isolation could be related to late life depression.

Objective To describe the pathologies related to elderly patients with depression. To study possible relationship between depression and others pathologies in elderly patients.

Methods This retrospective study included 124 geriatric patients enrolled in a private long-term care institution with mean age of 86.2 ± 6.5 years old, mean weight of 60.28 ± 2.00 kg and mean period of hospitalisation of 4.4 ± 2.3 years. For data analysis, double-entry tables and tests of proportion Qui-square were used.

Results Cardiovascular, respiratory, endocrine metabolic, skeletal muscle, sense organs, hematological, digestive tract; neuropsychological and genitourinary, diseases were analyzed.

We observed a significant correlation between depression and endocrine-metabolic (*P* value of 0.0003), sense organs (*P* value of 9.298 E-5) and skeletal muscle pathologies (*P* value of 6.843 E-6)

Conclusions We observed in that population that depression could be prevalent in elderly patients with endocrine-metabolic, sense organs and skeletal muscle pathologies.

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EV0428

Effect of yoga and meditation on accelerated cellular aging in major depressive disorder patientsT. Madhuri^{1,*}, R. Dada¹, R. Sagar²¹ All India Institute of Medical Science, Anatomy, Delhi, India² All India Institute of Medical Science, Psychiatry, Delhi, India

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Introduction Accelerated aging is associated with major depressive disorder (MDD) and studies of yoga and meditation based lifestyle intervention (YMLI) on biomarkers of cellular aging are lacking.

Aim and objectives To investigate the peripheral blood biomarkers of cellular aging in MDD patients after short term YMLI. Biomarkers include DNA damage, oxidative stress (OS), telomere attrition, and nutrition sensing assessed respectively by 8-hydroxy 2'- deoxyguanosine (8-OHdG); reactive oxygen species (ROS) and total antioxidant capacity (TAC); telomere length and telomerase activity; and sirtuin-1.

Methods We consecutively enrolled 33 MDD patients and 40 healthy subjects; 30 MDD patients were followed up with 12-week YMLI. Biomarkers of cellular aging in peripheral blood were measured with assay kits. All patients were evaluated by examining the correlation between cellular aging markers and Montgomery-Asberg Depression Rating Scale (MADRS) scores.

Results The levels of DNA damage, OS, and telomere attrition in MDD patients were significantly higher than healthy subjects (all *P* = 0.005). The MADRS scores had a significantly positive association with 8-OHdG and ROS levels and negative association with TAC, telomerase and sirtuin-1 levels (all *P* < 0.01).

Conclusions Peripheral blood biomarker levels in our results suggest significant cellular aging in MDD patients compared to healthy subjects. There was strong correlation between the changes in biomarkers of cellular aging and clinical improvement in MDD. Our study is the first to show significant increase in sirtuin-1 levels in MDD patients after yoga and meditation. Therefore, biomarkers of cellular aging might be indicators of MDD severity and clinical remission after YMLI.

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EV0429

Depression screening in primary care patients

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Introduction Depression is a common mental disorder that can be associated with more functional disability than most chronic medical illnesses and the increased reporting of medically unexplained somatic symptoms.

Aim To assess the prevalence of depression in a Tunisian population, as well as the associated factors.

Methods We conducted a cross-sectional, descriptive and analytic study, among 707 subjects consulting in 20 primary care

units in Sfax and Tunis, Tunisia. These participants, randomly chosen, were asked to answer a questionnaire after their consent. Depressive symptoms were evaluated using the “Beck Depression Inventory” (BDI).

Results The mean age of participants was 39.84 years. Among them, 38.6% had a low educational level (illiterate or primary school level); 45.3% were professionally inactive and 92.9% had a low to medium socio economic level. Medical, psychiatric and suicide attempt histories were reported respectively in 51.2%, 7.6% and 1.8% of cases. According to BDI, a mild depression was noted in 22.9%; moderate 16.1%; severe 4.1%. Among those presenting a moderate to severe depression (MSD), only 16.8% were followed up in psychiatry, 4.2% were receiving antidepressant and 9.8% benzodiazepine. MSD was associated with low educational level ($P < 0.001$); low to medium socio economic level ($P < 0.001$); psychiatric histories ($P < 0.001$); suicide attempt histories ($P < 0.001$); somatic histories ($P < 0.001$).

Conclusion Our study highlighted a high prevalence of depression that is still under diagnosed and therefore poorly managed. General practitioners should be made aware of the importance of screening for depression in medical patients because it not only complicates their overall medical treatments, but also impedes their physical and social functioning.

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EV0430

Depressive symptoms among genders

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Introduction Depression is one of the most well-known psychological issues and is among the most severe ones. World Health Organisation's (WHO) report on health identifies 1.9% lifetime prevalence of depressive episode for males and almost twice as high—3.2% for females.

Methods This study aimed to map the depressive symptoms among working population in Czech Republic.

Results Analysis of covariance showed that there is significant effect of age $F(52) = 6.58, P = 0.010$ and gender $F(52) = 12.53, P < .001$ and t-tests showed the means of BDI II scores were significantly different for genders with females having higher mean (11.91) than males (9.80), $t(1025) = -3.42, P < .001$.

Conclusion The clinical burden of depression is still an increasing one in today's society and this research helped to identify the potentially most vulnerable individuals. These seem to be working women aged 35–44.

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

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EV0431

Core self-evaluation and depression among caregivers of Alzheimer disease patients

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Introduction Caregivers of Alzheimer Disease (AD) patients suffer from chronic stress and psychophysical burden, which often lead to depression symptoms. It seems that core self-evaluation (CSE), coping with stress and social support might be modifying factors in coping with situation of caregiving.

Aims The aims of the study were to examine: (1) level of depression; (2) relationships between CSE, style of coping with stress, social functioning and depression severity among caregivers.

Methods The study involved 60 caregivers of AD patients who were children of the sick and have been caring for at least one year. It was cross-sectional and assessed by questionnaires. Following tools were used: Core Self-Evaluation, Beck Depression Inventory, Coping Inventory for Stress Situations, Distress Thermometer and an original questionnaire assessing the situation of caregiving.

Results A total of 51.7% of responders demonstrated severity of depression symptoms, associated to at least one mild clinical depression episode. The factors introduced to the model explained 65% variance of depression symptoms. Predictors of greater depression symptoms proved to be: low CSE ($\Delta R^2 = 0.32; \beta = -0.12$), low social support ($\Delta R^2 = 0.08; \beta = -0.27$), low life satisfaction ($\Delta R^2 = 0.02, \beta = -0.26$), high levels of distress ($\Delta R^2 = 0.12, \beta = 0.31$), coping style focused on emotions ($\Delta R^2 = 0.12, \beta = 0.17$).

Conclusions In the area of caregivers' psychological assistance and depression therapy, interventions leading to increase of CSE and providing adequate social support that contributes to better care provision and maintaining proper self-image, should be taken into consideration.

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

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Neurometabolic alterations in a depression-like rat model of chronic forced swimming stress using in vivo proton magnetic resonance spectroscopy at 7 T

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Although recent investigations of major depressive disorder (MDD) have focused on the monoaminergic system, accumulating evidence suggests that alternative pathophysiological models of MDD and treatment options for patients with MDD are needed. Animals subjected to chronic forced swim stress (CFSS) develop behavioral despair. The purpose of this study was to investigate the *in vivo* effects of CFSS in the rat prefrontal cortex (PFC) with 7 T and short-echo-time proton magnetic resonance spectroscopy (¹H MRS). Ten male Wistar rats underwent 14 days of CFSS, and *in vivo* ¹H MRS and forced swim tests were performed before and after CFSS. Point-resolved spectroscopy was used to quantify metabolite levels in the rat PFC. The spectral analyses showed that *in vivo* ¹H MRS can be used to reliably assess the Glu system. The rats showed significantly increased immobility times and decreased climbing times in the FST after CFSS, which suggested that the rats developed behavioral despair. The pre-CFSS and post-CFSS Glu and Gln levels did not significantly differ ($P > 0.050$). The levels of myo-inositol, total choline, and N-acetylaspartate, myo-inositol/creatinine, and total choline/creatinine increased significantly ($P < 0.050$). Similar findings have been reported in patients with MDD. Taken together, these results suggested that the CFSS-induced metabolic alterations were similar to those found in patients and that high-field and short-echo-time *in vivo* ¹H MRS can be used to investi-