European Psychiatry 41S (2017) S521–S582

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25th European Congress of Psychiatry

ePoster viewing part 3

e-Poster Viewing: Depression

EV0360

Global arginine bioavailability ratio is decreased in patients with major depressive disorder

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Introduction The global arginine bioavailability ratio (GABR) is used to estimate arginine supply. Arginine is precursor to nitric oxide (NO) that has been suggested to play a role in major depressive disorder (MDD). NO also participates in neuronal, inflammatory and cardioprotective functions.
Objectives To compare GABR between:
– D patients and non-depressed controls;
– remitted and non-remitted MDD patients;
– baseline and follow-up within remitted and non-remitted MDD groups.
Aims To investigate the role of NO production in MDD.
Methods The sample comprised 99 MDD patients and 253 non-depressed controls (Beck Depression Inventory scores < 10) aged 20–71 years. Altogether, 78 patients returned for the follow-up; 33 were remitted and 45 non-remitted. GABR was calculated from serum levels of arginine, citrulline and ornithine, which were analysed using ultra-performance liquid chromatography. Differences between the study groups were examined using logistic regression adjusted for age, gender, smoking, alcohol use, physical exercise and glycated haemoglobin. The follow-up regression analyses were adjusted for age, gender and physical exercise.
Results Lowered GABR was associated with belonging to the MDD group (OR 0.13, 95% CI 0.03–0.50). Exclusion of participants using anti-depressants that were associated with measured metabolites did not change the results. Over the follow-up period, the remitted and non-remitted groups both showed an increase in GABR ($Z = -.53$, $P < 0.001$ and $Z = -3.00$, $P = 0.003$, respectively).
Conclusions Decreased GABR may characterise MDD. This could affect neuronal, immunological and cardioprotective functions of NO.
Disclosure of interest The authors have not supplied their declaration of competing interest.

http://dx.doi.org/10.1016/j.eurpsy.2017.01.690

EV0361

Depression and multiple sclerosis–pathophysiological links: From biology to treatment

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Introduction Depressive disorders (DD) are the second cause of disability worldwide. DD affect predominantly working age individuals, recurring in 75% of cases. DD pathophysiology is intricate and multi-factorial. Several inflammatory diseases have been linked to mood disorders. Amidst these conditions is multiple sclerosis (MS), a chronic inflammatory disease of the central nervous system, characterized by frequent exacerbations and progressive functional loss.
Objective To review the current knowledge on DD and MS as comorbidities and the underlying pathophysiologic mechanisms.
Methods We performed a bibliographic search in Pubmed–publications released in the last 5 years, written in English, Portuguese and Spanish, containing the keywords depression, inflammatory disorders, multiple sclerosis.
Results The inflammatory hypothesis of depression provides a strong foundation to explain its close link with multiple sclerosis. The incidence and prevalence of DD is significantly higher in MS, especially in men. Functional imaging studies have shown that depressive symptoms are closely linked to the extension of inflammatory lesions, especially on the frontal and parietal regions, with particular emphasis to those affecting the grey matter. On the one hand, the clinical course and response to treatment of MS may be hindered by DD; on the other hand, the evolution of MS lesions leads to fluctuations in mood, with significant improvement of DD with successful MS treatment, independently of physical improvement.

0924-9338/

https://doi.org/10.1016/j.eurpsy.2017.01.690 Published online by Cambridge University Press