EW0103

Targeting kynurenine pathway in olfactory bulbectomised mice: Inflammatory and neurodegerative pathway of depression

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Aims and objectives The aim of study was to evaluate the pharmacotherapeutic efficacy of NDGA in experimental paradigm of depression i.e. olfactory bulbectomy (OB) specifically targeting kynurenine pathway.
Materials and method Depression like behaviours was induced in OB mice and evaluated by assessment of various behavioural (olfactory deficit test, forced swim test, splash test, open field test, sucrose preference test), biochemical (catalase, reduced glutathione, SOD, nitrite, MAO-A, MDA, corticosterone), inflammatory cytokines (TNF- α, IL-1β, IL-6, IFN-γ) levels and alterations in delta sleep was recorded using EEG. Kynurenine pathway metabolites were determined in plasma and brain using HPLC method. After 14 days post-surgery, olfactory bulbectomized (OBX) mice were administered nordihydroguaiaretic acid (5 mg/kg, 10 mg/kg and 25 mg/kg) daily i.p.
Results We have developed a new HPLC method for simultaneous estimation of monoamines and kynurenine pathway metabolites in plasma and brain samples of mice. Chronic treatment with nordihydroguaiaretic acid significantly restored all behavioural, biochemical and neurochemical alterations in OBX mice and increase in quinolinic acid and decrease in kynurenic acid point out the neurodegeneration hypothesis of depression.
Conclusion Nordihydroguaiaretic acid showed potent neuropharmacotherapeutic effect in OBX mice by virtue of its strong anti-oxidant, anti-inflammatory, anti-stress and by restoring quinolinic acid levels.
Disclosure of interest The authors have not supplied their declaration of competing interest.

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EW0104

Prefrontal theta cordance in the prediction of antidepressant response to various classes of antidepressants in patients with depressive disorder

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Introduction and objectives Previous studies demonstrated efficacy of reduction of QEEG prefrontal theta cordance (RC) after the first week of treatment in the prediction of antidepressant response.
Aims The study aimed to compare the ability of RC in the prediction of response to various antidepressant classes.
Methods All patients ($n = 142$) were treated with antidepressants (SSRI-58, SNRI-47, NDRI-22, NaSSA-15) for ≥ 4 weeks. Response was defined as MADRS reduction $\geq 50\%$. EEG were performed at baseline and week 1 of treatment and cordance was calculated for 3 prefrontal electrodes (Fp1, Fp2, Fz).
Results Logistic regression identified RC as a predictor of response to SSRI, SNRI and NDRI but not for NaSSA. Predictive parameters of RC for response to mentioned antidepressant classes are displayed in the Table 1.
Areas under curves of ROC analysis (AUC) of RC for response prediction were not significantly different among antidepressant classes.
Conclusion The predictive efficacy of RC for response to SSRI, SNRI and NDRI was comparable.
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Table 1

	SSRI	SNRI	NDRI
n	58	47	22
AUC RC week 1 (95%CI)	0.77 (0.65–0.87)	0.77 (0.62–0.88)	0.87 (0.66–0.97)
Positive predictive value of RC week 1 (95%CI)	0.81 (0.64–0.93)	0.72 (0.51–0.87)	0.91 (0.59–1.00)
Negative predictive values of RC week 1 (95%CI)	0.73 (0.52–0.89)	0.84 (0.60–0.97)	0.82 (0.48–0.98)
Accuracy of prediction	0.78	0.77	0.86

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

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EW0105

Major depressive disorder: Recurrence risk factors

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Introduction In spite of the frequency and the gravity of the depressive episodes, the major depressive disorder (MDD) is diagnosed and treated today insufficiently and the risk factors of its recurrence are little approached.
Aims of the study Describe the socio–demographic, clinical and therapeutic characteristics of patients with MDD and identify the factors involved in the recurrence risk.
Methodology This is a retrospective study carried out in the university hospital of Mahdia, Tunisia during two years. We have included patients with a follow up for at least two years and diagnosed with MDD, isolated episode or MDD, recurrent episode according to the DSM-IV-TR criteria. Data collection was performed using two pre-established questionnaires respectively with 51 and 92 items. We have estimated the time to recurrence with the Kaplan-Meier estimator.
Results We have collected 150 patients. The time to recurrence was 109 months. Five factors were associated with recurrence: early age at onset of the disorder, family history of mood disorders, severity of the index major depressive episode, persistent residual symptoms and ceasing treatment.
Conclusion Depression is a very common mental illness that is highly recurrent in individuals. There is great interest in the development of strategies that might reduce the recurrence of depression.
Disclosure of interest The authors have not supplied their declaration of competing interest.

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