

Objectives: Research progress of metabonomics of blood endogenous small molecules in depression

Methods: Metabonomics is a newly developed discipline after genomics and proteomics, and is an important part of system biology. Metabonomics provides a new approach to explore the etiology, mechanism, prognosis and screening potential biomarkers of MDD. Blood contains almost all the small molecule metabolites in the body. The changes of metabolites in blood can represent the changes of metabolites in other body fluids. Moreover, this sample is easy to obtain and has less trauma, so it is the most common biological sample in clinical detection.

Results: At present, there are many studies on the metabonomics of endogenous small molecules in MDD blood, which provides the possibility for further screening of MDD related biomarkers.

Conclusions: In this paper, the research progress of related biomarkers in MDD blood is reviewed.

Disclosure: No significant relationships.

Keywords: metabonomics; blood endogenous small molecules; Depression

EPV0529

Paliperidone induced sinus tachycardia in a patient with first episode of psychosis (FEP)

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Introduction: This is a presentation of the FEP of a 23 y.o. patient. The patient had a Duration of Untreated Psychosis (DUP) of 6 months and Duration of Untreated Illness (DUI) of six years. The therapeutic response and the adverse effects of Paliperidone are being described.

Objectives: To investigate the tolerance of Paliperidone in a patient with FEP.

Methods: The patient was assessed regularly by the psychiatric team consisting of a CT doctor and one General Adult Consultant. Appropriate psychological assessments and investigations took place.

Results: Upon admission the patient appeared guarded. She also presented with weight loss and dehydration. Initial PANSS score was 173, positive subscale 41. The patient was initially treated with monotherapy 6mg of Paliperidone. However, the heart rate was around 100 bpm culminating as high as 156 bpm. The ECG indicated sinus tachycardia. The patient presented with serious EPSs and diarrhea. Simpson-Angus Scale score 10. Metoprolol 25mg was prescribed twice a day. The clinical team proceeded in cross titration replacing Paliperidone with Olanzapine. A brain CT scan was also performed, unremarkable. After 10 days of therapy the PANSS score reduced to 102, positive subscale 21.

Conclusions: Initial sinus tachycardia is a common adverse effect of Paliperidone. However in this case the tachycardia was refractory in time even after the 7th day, making an alternative SGA trial necessary.

Disclosure: No significant relationships.

Keywords: paliperidone; FEP; Tachycardia

EPV0530

An innovative anticonvulsant - a GABAA receptor modulator with an alternative mechanism of action and enzyme-inducing detoxifying properties

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Introduction: The development of original drugs - new generation GABAA receptor modulators (GABAAR), with an anti-alcohol orientation, non-addictive and stimulating detoxification processes, makes it possible to increase the effectiveness of therapy and reduce the cost of treatment.

Objectives: Study the mechanism of interaction between m-Cl-BHU and GABAA - receptor

Methods: Molecular docking was performed to study the molecular docking of m-Cl-BHU with at the binding site of the target protein GABAAR. Radioreceptor studies were carried out using [3H] flunitrazepam binding with synaptosomal receptors in the cerebral cortex of Wistar rats in experimental alcoholism under the influence of therapy with m-CL-BHU. Kinetic parameters (T1/2, Clt, MRT, MET, AUC) of a model substrate - antipyrine were determined in the saliva of healthy volunteers and alcoholic patients.

Results: Results of molecular docking (Schrödinger program (Glide) showed: m-CL-BHU (meta-chlorobenzhydryl urea) is complementary to the benzodiazepine GABAAR. Binding energy is low) (scoring (GScore) -11.14 kKcal/mol); m-CL-BHU interacts with key amino acids at the $\alpha 1\gamma 2$ interface: Tyr159, Tyr209, H101 Phe77 and is characterized by a high degree of model fit - dG insert: 0.741 Binding of [3H] flunitrazepam to the benzodiazepine site of GABAAR in rat brain in experimental alcoholism, who received 14 days of m-CL-BHU at 100 mg/kg /day, increased in receptor affinity. Changes in the kinetic parameters (T1/2, Clt, MRT, MET, AUC) of a model substrate - antipyrine in the saliva of healthy volunteers and alcoholic patients using Galodif (m-CL-BHU) at 300 mg/day 21 days

Conclusions: m-CL-BHU - GABAA receptor modulator with an alternative mechanism of action

Disclosure: No significant relationships.

Keywords: anticonvulsant; cytochrome; receptor; homeostasis; neuromorphology