other therapeutic strategies, such as combination or switching to other antidepressant or augmentation with other psychotropics. *Conclusions* There is strong evidence that SGAs augmentation is an effective and generally safe therapeutic approach to patients with MDD who respond poorly to antidepressants. Nevertheless, more studies are needed to understand the efficacy of this treatment comparing other therapeutic approaches.

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

http://dx.doi.org/10.1016/j.eurpsy.2016.01.308

#### EW191

### Antidepressant-induced hyponatremia

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Introduction Hyponatremia is one of the electrolytic disorders most comonly observed among general hospitalized populations (2% of hospitalized patients). A form of hyponatremia is the syndrome of inappropriate antidiuretic hormone secrection (SIADH). One of its diverse causes is medication. Selective serotonine reuptake inhibitors (ISRSs) can cause hyponatremia due to SIADH, particularly among elderly population.

Clinical case report A 81-year-old female treated with paroxetine 20 mg/day because of depression. Two weeks later she starts feeling nausea, somnolence and motor inhibition. The sodium level previous to the onset of treatment was normal but after two weeks it has decreased to 121 mEq/L, pointing to SIADH induced by ISRSs. Discussion The incidence of hyponatremia among elderly patients treated with antidepressants of ISRSs class has increased. The prevalence varies between 0.5 and 25%. Although half of the patients are asymptomatic, the mortality is rate may reach 25%. It generally develops during the first month of treatment and is reversible between 2 and 28 days after the suspension of the ISRSs. Disclosure of interest The authors have not supplied their declaration of competing interest.

http://dx.doi.org/10.1016/j.eurpsy.2016.01.309

#### EW193

## The impact of neuroinflammation and inflammatory cytokines in depression and suicidal behavior

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Introduction It has been suggested that neuroinflammation and inflammatory mediators may play a crucial role in the pathophysiology of both major depression and suicidal behavior. Immunological differences have been reported between both subjects with major affective disorders and suicidal behavior.

Objectives The main objective of this review was to deeply investigate the nature of the association between inflammatory cytokines in depression and suicidal behavior. Aims: The study aimed to conduct a systematic review of the current literature to investigate the association between inflammatory cytokines, depression, and suicidal behavior.

Results Generally, an imbalance between pro-inflammatory and anti-inflammatory cytokines has been documented in both major depression and suicidal behavior. The presence of major depres-

sive disorder (MDD) with suicidal ideation/attempts was associated with differences in inflammatory cytokine profile when compared to that without suicidal ideation/attempts. However, not all studies demonstrated a positive correlation between inflammatory cytokines and suicidal behavior.

Conclusions The mentioned association between inflammatory cytokines, depression, and suicidal behavior does not imply the existence of a causal relationship. Further additional studies should clarify the molecular mechanisms of the immune activation pathways underlying depression and suicidality.

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

http://dx.doi.org/10.1016/j.eurpsy.2016.01.311

#### EW194

# N-methyl-D-aspartate antagonists in depression-15 years after the first ketamine clinical study what has changed?

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Introduction In the last decades, multiple studies have suggested evidences of disturbances within the glutamate system in depressed patients. The first clinical study using ketamine in depression treatment was conduct fifteen years ago. Since then several studies tried to understand the mechanisms underlying the antidepressant effects of ketamine, as well as discover new drugs with better pharmacodynamic profiles.

Objectives/aims Review the literature on the role of glutamate system in depression and novel approaches with glutamate N-methyl-D-aspartate receptor antagonists in depression.

*Methods* Search and review of scientific literature on PubMed database with the keywords.

"major depressive disorder", "depression", "ketamine", "glutamate", "NMDA", "neuroplasticity".

Results Abnormalities of the glutamate clearance at synaptic space and astrocytic dysfunction associated with glutamate metabolism have been associated with depressive symptomatology. In depressed patients, reduced levels of glutamate have been described by magnetic resonance spectroscopy in multiple cortical areas, amygdala and hippocampus, supportting the hypothesis of glutamate system involvement in the neurobiology of depression. Indeed, in the last 15 years, multiple clinical studies using ketamine provided some evidence that glutamate N-methyl-D-aspartate receptor antagonism could be an approach for refractory forms of depression. However, regardless all of the evidences, no drug targeting specifically the glutamate system has been approved for depression treatment.

Conclusions The glutaminergic system plays a role in the pathophysiology of depression, why it's a possible therapeutic target. So, it's of utmost importance that future studies keep the focus in this area, looking for new drugs active in this system.

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

http://dx.doi.org/10.1016/j.eurpsy.2016.01.312

#### EW195

## Disturbance of serum albumin conformation in patients with melancholic depression

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