

## EW0311

### Evaluation of cognitive dysfunction in a sample of patients affected by bipolar disorder

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**Introduction** Cognitive dysfunctions concerning working memory, attention, psychomotor speed, and verbal memory are a disabling feature of the bipolar disorder (BD). According to scientific literature, cognitive disturbances are present not only in depressive and manic phases of BD, but also during the euthymic period, without regard to whether or not drugs are assumed.

**Objective** To determine the presence of one or more dysfunctions in cognitive domains in a sample of subjects suffering from BD, in euthymic phase, compared with healthy controls.

**Aims** Evaluation of the following cognitive performances in subjects affected by BD: speed of processing, attention/vigilance, working memory, verbal learning, visual learning, reasoning and problem solving, and social cognition.

**Methods** Forty-six patients affected by BD in the euthymic phase (mean age: 43.17 years old; 39.13% male), and 58 healthy controls (mean age: 39.21 years old; 51.72% male) were enrolled in the psychiatric unit of Azienda Sanitaria Locale, Foggia. The neuropsychological battery MATRICS Consensus Cognitive Battery (MCCB) was administered by trained psychiatrists.

**Results** We found the presence of cognitive impairment, affecting six out of seven of cognitive functions assessed ( $P < 0.001$ ): speed of processing, attention/vigilance, working memory, verbal learning, visual learning, reasoning and problem solving.

**Conclusions** These preliminary results from our case-control study show that cognitive deficits are clearly present also during the euthymic phases of subjects with bipolar disorder (mainly pertaining attention/vigilance domain). These cognitive abnormalities may represent a biomarker of bipolar disorder.

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

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## EW0312

### Patterns of impairment in executive functions within unipolar and bipolar depression

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**Introduction** The majority of studies revealed that cognitive deficits are an important aspect in many psychiatric illnesses, such as bipolar disorder and major depressive disorder. In the past, cognitive impairment was considered part of depression and it was expected to diminish as other mood symptoms improved with treatment.

**Method** This study is based on the review of recent literature, performed in order to understand the dimension of executive impairment in unipolar and bipolar depression.

**Results** Both unipolar and bipolar depressed patients display cognitive deficits in several cognitive domains within executive functions. Different subcomponents of executive functions are altered in both types of patients, but impairments in sustained attention appear specific in bipolar depression while dysfunctional divided attention is reported in unipolar disorder. Studies describe deficits in planning strategies and monitoring processes that are characteristically impaired in unipolar depressed patients. Also these subjects tend to make more perseverative responses suggesting set shifting deficits and moreover they require longer time and more cognitive effort in order to accomplish tasks involving inhibitory control or cognitive flexibility. Other findings suggest that bipolar I depressed patients perform worse than bipolar II depressed patients and unipolar depressed patients across all executive functions especially in the decision making process that is considered to be a trait marker for bipolar disorder with no differences between the two types of bipolar subjects.

**Conclusions** Executive functions represent a term that includes a higher order of cognitive abilities with deficits that are present in both disorders but display slightly different patterns of impairment.

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

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## EW0313

### Objective quantification of psychomotor dynamics during pharmacological treatment of bipolar depression

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**Introduction** Psychomotor disturbances are among the core symptoms of endogenous depression. They reflect the underlying pathophysiology of the depressive episode and are sensitive to the neurobiological effects of its pharmacological treatment. Being objectively manifested, the psychomotor functions and dysfunctions are technically recordable and measurable by the available motion analysis systems.

**Aims** To objectively record and measure the psychomotor dysfunctions in bipolar depression and their dynamics during pharmacological treatment.

**Methods** We introduced an original (internationally patented) equilibrium method for objective and quantitative recording of psychomotor dysfunctions during stepping locomotion in 37 hospitalized patients with bipolar depression and 30 well-matched healthy controls. Two separable psychomotor functions were analyzed in parallel: conscious (voluntary) activity and subconscious (automatic) reactivity. Both patients and controls were examined twice in order to quantify their psychomotor dynamics. Patients were examined at the first day of their hospitalisation and the day before their discharge. The two consecutive examinations of the controls were with equivalent time intervals.

**Results** There was no significant psychomotor dynamics ( $P > 0.05$ ) in the healthy controls between their first and second equilibrium recording. Psychomotor activity and/or reactivity of the patients were relatively slower at their first recording and significantly accelerated ( $P < 0.05$ ) at their second recording after effective pharmacological treatment.

**Conclusions** Objective recording and quantitative assessment of psychomotor dynamics in patients with bipolar depression during the pharmacological treatment of their current episode could be a sensitive measure of their improvement and might be used as a surrogate pharmacodynamic biomarker for objective treatment monitoring.