

## AS06-02 - CAN WE USE CHANGES IN PREFRONTAL FUNCTION TO PREDICT ANTIDEPRESSANT RESPONSE IN BIPOLAR DISORDER?

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**Introduction:** There are no clinically useful biomarkers for the prediction of treatment response in bipolar depression (BD). One of the best-documented markers of response to an antidepressant therapy in patients with unipolar depression is a decrease in quantitative electroencephalography measure of prefrontal cordance in theta frequency band (Leuchter et al., 2010).

**Aims:** The aim of our study was to examine whether the change of theta prefrontal cordance after one week of various antidepressive interventions predicts response to a 4-week treatment in patients with BD.

**Methods:** We enrolled 24 inpatients into the study. Theta prefrontal cordance was computed at baseline and after 1 week of treatment. Depressive symptoms were evaluated using the Montgomery and Åsberg Depression Rating Scale.

**Results:** Twenty patients finished the study. Seven of 8 responders and only 2 of 12 non-responders showed a decrease in prefrontal theta cordance after the first week of drug administration ( $p=0.02$ ). Using the decrease of prefrontal cordance value as a predictor of treatment response yielded Positive Predictive value of 0.78 and Negative Predictive Value of 0.91. We also found higher baseline theta cordance in responders. Nevertheless when baseline cordance and cordance change entered into the logistic regression model, only the latter emerged as a predictor of response ( $p=0.007$ ; correctly classified 85% cases).

**Conclusion:** The change in prefrontal theta cordance was associated with subsequent change in depressive symptoms and potentially might be a useful marker of response to antidepressive interventions in BD patients (Bares et al., 2011). Supported by a grant MSMT 1M0517.