Young Mania Rating Scale, Positive and Negative Syndrome Scale and Clinical Global Impression Scale.
Results Among the patients with bipolar disorder, 14 (% 46.6) were in a manic/hypomanic state and 12 (% 40) were in a euthymic state. Serum IL-6 levels were significantly higher ($P = 0.018$), TNF-α and S100B levels were significantly lower in the early stage group ($P < 0.001$ and $P = 0.03$, respectively). After repeated analysis with only drug-naive patients, the results showed no difference. There was a positive and significant correlation between TNF-α levels and CGI, MADRS scores (all $P < 0.05$); NSE levels and MADRS scores ($P < 0.05$).
Conclusions This study supported the association of early stage bipolar disorder with inflammation and neurodegeneration. IL-6 may be a potential biomarker. Thus, early diagnosis and intervention may be crucial to prevent progressive neuroinflammation and neurodegeneration in early stages of disorder.
Disclosure of interest The authors have not supplied their declaration of competing interest.

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O021

The correlation between plasma brain-derived neurotrophic factor and cognitive function in bipolar disorder is modulated by the BDNF Val66Met polymorphism

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Objectives Brain-derived neurotrophic factor (BDNF) may be involved in the pathogenesis of bipolar disorder (BD). The functional BDNF Val66Met polymorphism (rs6265) is associated with secretion of BDNF. The current study aimed to explore the correlation between changes of plasma BDNF and cognitive function after 12 week of treatment, considering the influence of the BDNF val66Met polymorphism. The correlation of changes of plasma BDNF with quality of life (QOL) was explored.
Methods First diagnosed patients with BD were recruited. Symptom severity, plasma BDNF levels were examined during weeks 0, 1, 2, 4, 8, and 12. QOL, Wisconsin Card Sorting Test (WCST) and the Conners' Continuous Performance Test (CPT) were assessed at baseline and endpoint. The genotype of the BDNF Val66Met polymorphism was determined. The change of cognitive function and QOL measures over 12 weeks were reduced by factor analysis. Pearson's correlation was used to investigate the association between change of plasma BDNF levels with cognitive function and QOL.
Results Five hundred and forty-one BP patients were recruited. Three hundred and fifty-five (65.6%) patients completed the 12-week follow-up. A significant negative correlation was found between changes of plasma BDNF level with factor 1 (WCST) ($r = -0.25$, $P < 0.001$). After further stratification according to subtypes of BD and the BDNF genotypes, above significant correlation was found only in those with BP-I and the BDNF Val66Met Val/Met genotype ($r = -0.54$, $P < 0.008$).
Conclusion We conclude that changes in plasma BDNF significantly correlated with changes in WCST in patients with BD; such correlation is moderated by the BDNF Val66Met polymorphism and subtype of BD.
Disclosure of interest The author has not supplied his declaration of competing interest.

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O022

Cortical inhibition in symptomatic and remitted mania compared to healthy subjects: A paired-pulse TMS study

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Introduction Cortical inhibition (CI) is a neurophysiological outcome of the interaction between GABA inhibitory interneurons and other excitatory neurons. Transcranial magnetic stimulation (TMS) measures of CI deficits have been documented in both symptomatic and remitted bipolar disorder (BD) suggesting it could be a trait marker. The effects of medications and duration of illness may contribute to these findings.
Objective To study CI in BD.
Aims To compare CI across early-course medication-naive BD-mania, remitted first episode mania (FEM) and healthy subjects (HS).
Methods Symptomatic BD subjects having < 3 episodes, currently in mania and medication-naive ($n = 27$), remitted FEM ($n = 27$; YMRS < 12 and HDRS < 8) and 45 HS, matched for age and gender, were investigated. Resting motor threshold (RMT) and 1-millivolt motor threshold (MT1) were estimated from the right first dorsal interosseous muscle. Paired-pulse TMS measures of short (SICI; 3ms) and long interval intracortical inhibition (LICI; 100ms) were acquired. Group differences in measures of CI were examined using ANOVA.
Results Table 1.
Conclusions Symptomatic mania patients had the highest motor thresholds and the maximum LICI indicating a state of an excessive GABA-B neurotransmitter tone. Remitted mania patients had deficits in SICI indicating reduced GABA-A neurotransmitter tone. Putative changes in GABA-A neurotransmitter system activity with treatment may be investigated in future studies. CI has received less attention in BD as compared to schizophrenia and is a potential avenue for future research in this area.

Table 1 Measures of motor threshold and CI across the three groups.

	Symptomatic mania (n=27)	Remitted mania (n=27)	HS (n=45)	F [a]	P[b]	Posthoc LSD
RMT Mean(SD)	37.93 (8.85)	32.63 (6.19)	37.09 (7.12)	4.161	0.019	BD > FEM HS >FEM
MT1 Mean(SD)	50.97 (12.15)	41.48 (8.27)	49.00 (11.34)	5.964	0.004	BD > FEM HS >FEM
SICI (%) Mean(SD)	27.47 (33.14)	9.05 (58.65)	35.34(28.39)	3.578	0.032	FEM<HS
LICI (%) Mean(SD)	76.93 (19.52)	71.52(27.48)	56.32 (45.87)	3.215	0.045	BD > HS

[a]Degrees of freedom 2,96.
[b]Probability error for the omni-bus test.

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