

Methods: A new word definition task was designed to overcome the ceiling effect. It was developed for elucidating semantic disorganization in word comprehension across grammatical categories (ie nouns, verbs and adjectives) and administered to 32 patients with schizophrenia, 28 patients with bipolar disorder and 32 matched healthy controls.

Results: A $3 \times 2 \times 3 \times 2$ repeated-measures ANOVA indicated that while both patient groups illustrated semantic processing deficits when compared with healthy controls, word comprehension across grammatical categories was comparable despite diagnosis, as was the influence of word frequency. All subject groups were better at defining adjectives compared with nouns and verbs, and comprehension increased for high-frequency words.

Conclusions: Despite the semantic processing deficits illustrated by both patient groups, processing of grammatical categories was not differentiated by the presence of psychosis. Additional research into the role of encoding, word organization, and specific basis for variation in the processing of adjectives warrants further research.

The response to sulpiride in major depression before and after cognitive behavioural therapy: D2 receptor function

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Background: Previous studies of D2 receptor function in depressed patients have shown mixed results, with some (but not all) reporting increased sensitivity/upregulation of D2 receptors in untreated depression, while others report that effective treatment results in increased sensitivity/upregulation.

Methods: D2 receptor function was assessed in 24 patients with major depression before and 16 patients after 16 weeks of treatment with cognitive behavioural therapy (CBT) using a challenge with a selective D2 antagonist, sulpiride. Four hundred milligrams of sulpiride was administered orally on two test days and response measured in two different dopaminergic pathways: the change in prolactin secretion (tuberoinfundibular pathway) and changes in self-rating scale measures of mood (VAS, POMS), anxiety (STAI) and pleasure (SHPS) (mesocorticolimbic pathway).

Results: There was no significant difference in the prolactin response to sulpiride before and after treatment ($z = -1.4$, $P = 0.156$). On both test days, sulpiride led to an improvement in mood (VAS and

POMS scales). After CBT, this effect was significantly reduced as measured by the POMS scale ($t = -2.3$, $P = 0.038$) but unchanged on the VAS scale. Although patients exhibited significant clinical improvement after treatment (as measured by percentage improvement in HDRS score), there was no correlation between response to CBT and changes in response to sulpiride in either pathway.

Conclusions: No change in tuberoinfundibular D2 receptor function was detected following CBT. A change in mesocorticolimbic D2 receptor function was detected; however, no relationship between changes in D2 receptor sensitivity and clinical response to CBT was evident in this group of depressed patients.

The Clinical Global Impressions Scale Modified for Substance Use (CGI-SU) in patients with bipolar disorder

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Background: Bipolar disorder is a chronic illness that is commonly associated with comorbid substance use. The development of the Clinical Global Impressions Scale Modified for Substance Use (CGI-SU) was to produce a simple, quick and easy-to-administer assessment tool. It was used in a randomized placebo-controlled trial of *N*-acetylcysteine (NAC) in bipolar disorder. It was hypothesized that NAC would improve the outcomes in bipolar disorder and ultimately in comorbid substance use.

Methods: The study focused on the CGI-SU, which is a newly developed assessment tool based on the original CGI for improvements. The new scale is intended for use in routine clinical practice to monitor improvements in a patient's comorbid substance use. It was administered to participants ($n = 75$) in the NAC in bipolar disorder trial. The CGI-SU scale investigates changes in six items, including ethanol, caffeine, nicotine, delta-9-tetrahydrocannabinol and two additional items depending on the participants' use of substances.

Results: About 78.7% were using ethanol, 92% caffeine, 45.3% nicotine and 7.9% delta-9-tetrahydrocannabinol. These participants' use of substances permitted us to monitor the improvements of their substance use over the trial period.

Conclusions: The simplicity and brevity of the CGI-SU make it a valuable outcome measure. It enables the monitoring of the improvements or lack of improvements made by patients with bipolar disorder and