drawn from the early stage of larger study examining adolescent resilience. Adolescents were found to express eclectic and individual views surrounding the topic, with each response being uniquely representative of their beliefs. Themes commonly found included religion and God with many showing some degree of change. Some of these changes involved abandoning one religion in favor of another or changes in ideas about God. There was no significant relationship between those with a diagnosis and those without regarding their religious and spiritual beliefs; however, there were differences between groups in using beliefs to cope, beliefs about a spiritual force and its influence on day-to-day and world affairs. Spiritual and religious ideas are important for adolescents and those in the study showed a great diversity in ideas about this topic. It would be of further interest to research how these beliefs and ideas about religion and spiritual change over time and learn about how adolescents without a diagnosis use their beliefs to assist in coping.

ECT and neuroprotection: a review and proposed study

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Background: Electroconvulsive therapy (ECT) is a highly effective treatment for depression but its use is limited by associated cognitive side-effects. Several theories have been proposed for the mechanisms underlying cognitive impairment with ECT: excitotoxic damage through influx of intracellular calcium or excessive glutamatergic transmission, alteration in opioid receptor density and induction of inflammatory processes (Krueger et al. 1992; Bazan et al. 2005). Several neuroprotective agents have been proposed to reduce ECT-related cognitive effects, leading to some trials in animal and human subjects.
Method: A comprehensive literature review (PubMed, Medline) identified animal and human clinical research trials of various agents proposed to have a neuroprotective effect on ECT-induced cognitive impairments.
Results: Several agents have been shown to reduce memory impairment after electroconvulsive shock (ECS) in rats, for example, calcium channel blockers, opioid receptor antagonists and glucocorticoid antagonists. However, results from clinical trials in humans have been less promising. There are early suggestions that ketamine anesthesia may be associated with fewer cognitive side-effects after ECT (McDaniels et al. 2006).
Conclusions: Strong evidence from ECS models of neuroprotective strategies have to date not been confirmed in human clinical trials. However, clinical trials have been sparse, with small sample sizes and confounding methodological issues. We propose a randomized sham-controlled study to assess the effect of several neuroprotective agents on ECT-induced cognitive impairment.

Spatial working memory task validation in a group of patients with schizophrenia and healthy volunteers

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Background: It is now agreed that cognitive deficit is an important aspect of the clinical presentation of schizophrenia. One parsimonious brain-behaviour model with good explanatory power for both animal and human models of the disorder is that of impairment of working memory (WM). Patients with schizophrenia show a reliable decrement of WM, which has been proposed to give rise to social and employment disabilities. The aim of the current study was to validate a computer-based behavioural spatial WM test in patients with schizophrenia.
Methods: A novel spatial WM test based on the '*n*-back' paradigm was used to compare 15 medicated patients with schizophrenia against 15 healthy volunteers. The task involved remembering the position of a target card from an arrangement of between two and four cards presented in a radial configuration, with instructions to determine whether the card that was face up at the time of presentation was in the same location as a card that had turned face up on the previous trial (1-back condition) or two previous trials (2-back condition). All subjects were retested a week later to determine the stability and reliability of the test.
Results: Repeated-measures ANOVA showed that patients with schizophrenia performed worse than healthy controls on tests of spatial WM.
Conclusions: The behavioural *n*-back task proved to be a quick and reliable measure of spatial WM in patients with schizophrenia. Our data further support previous findings of spatial WM deficits in schizophrenia.

Assessment of serotonin function, memory and spatial working memory using buspirone and placebo

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