BJPsych The British Journal of Psychiatry (2016)
208, A7. doi: 10.1192/bjp.208.2.A7

Highlights of this issue

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Biomarkers in bipolar disorder

Four papers in the *BJPsych* this month describe putative biological, including genetic, markers associated with a diagnosis of bipolar disorder. Bond *et al* (pp. 146–152) sought to build on prior brain volumetric studies to examine the relationship between body mass index (BMI) and a well-known neurochemical abnormality found in association with bipolar disorder – increased glutamate/glutamine or GIx. Compared with healthy controls, the authors found that a higher BMI predicted greater GIx in those with first-episode mania. The authors propose that weight-related neurochemical and brain structural abnormalities may be aetiologically important in bipolar disorder and that further research is needed both to confirm the findings and to explore the associations in other clinical groups. Focusing on late-onset bipolar disorder, Wium-Andersen *et al* (pp. 138–145) found that elevated levels of plasma C-reactive protein were associated with the disorder, both cross-sectionally and prospectively. The authors used data from a general population sample and additionally employed a Mendelian randomisation technique; the results of the latter could not exclude a causal association between C-reactive protein and late-onset bipolar disorder.

Two papers in the *BJPsych* this month explore the role of genetic factors in association with bipolar disorder – a *cis*-associated gene expression single-nucleotide polymorphism (SNP) on chromosome 20q11.22 and a *CACNA1C* polymorphism. Li *et al* (pp. 128–137) employed a genome-wide association study and gene expression integration approach and identified chromosome 20q11.22 as a likely risk region, with further exploratory analyses identifying associations between the risk SNP in healthy controls and both hippocampal volume and cognitive performance. Although the risk genes for bipolar disorder in the identified region are unknown, the authors call for future research to further elucidate the significance of their findings and highlight the advantages of the integrative approach taken. Jakobsson *et al* (pp. 195–196) explored the association between a SNP situated in *CACNA1C*, known to be linked to bipolar disorder, and cerebrospinal fluid markers. The authors identified an association with altered tau phosphorylation, a neurochemical marker of neuroaxonal plasticity.

Reviewing psychopharmacological treatments for depression

Reviews of both selective serotonin reuptake inhibitors (SSRIs) and ketamine used in the treatment of depression are featured in the *BJPsych* this month. Barth *et al* (pp. 114–119) investigated the notion that antidepressant efficacy has been overestimated in clinical trials as a result of unblinding by the occurrence of adverse events. Using meta-analytic, meta-regression and mediational analysis techniques, the authors found no evidence of an association between adverse events and SSRI efficacy, nor that adverse events mediated the effect of SSRIs. Schoevers *et al* (pp. 108–113) undertook a review of dosing, duration, effects, routes of administration and side-effects of ketamine used for either treatment-resistant depression or pain. The depression studies identified were considered methodologically poor overall and the antidepressant effects of ketamine low, regardless of administration route. The authors called for rigorous controlled trials examining short- and longer-term effects and side-effects in depression. In a linked editorial, Malhi *et al* (pp. 101–103) caution against pursuing much-needed new treatments for depression without rigorous evaluation, while acknowledging the problems associated with relying on the traditional approach to drug discovery and development.

Brain findings across a broad range of disorders: from delusional disorder to excoriation disorder

Vicens *et al* (pp. 153–159) have addressed the paucity of brain imaging studies of delusional disorder and report on a combined structural and functional magnetic resonance imaging (fMRI) study. Patients were found to have grey matter reductions in the medial frontal/anterior cingulate cortex and bilateral insula, with failure of deactivation in the former region during the *n*-back task and reduced resting-state connectivity in the latter region. The authors comment on the fact that the abnormalities found were similar but less widespread than those reported in schizophrenia. In trying to explain differential response rates to cognitive–behavioural therapy among those with depression, Doerig *et al* (pp. 175–181) found that patients with depression showed enhanced fMRI-determined activity after emotional activation in the amygdala and ventral striatum compared with controls, and that such enhanced activity was associated both with non-response to therapy and a poorer outcome. The authors comment on the potential of their findings for informing a tailored approach to treatment strategy. Chen *et al* (pp. 160–167) used magnetoencephalography data in a sample diagnosed with schizophrenia and found that, compared with controls, there was evidence of elevated delta and theta activity in the right frontal and right temporoparietal regions, with the delta activity in the former region associated with negative symptoms. Finally, excoriation or skin-picking disorder is another disorder poorly understood from a neurobiological perspective. In an attempt to address this gap in the literature, Odlaug *et al* (pp. 168–174) sought to probe the fronto-striatal circuitry in skin-picking disorder and found evidence of functional activation abnormalities in neural regions known to be involved in habit formation, action monitoring and inhibition.