

In this issue

This issue contains a review on reanalysis of whole genome data. Other sets of papers examine various aspects of mood lability, bipolar disorder, suicide, and attention deficit hyperactivity disorder and autism. Four final papers examine other topics.

Reanalysis of whole genome data

In their review paper Keers *et al.* (pp. 1231–1235) sought to identify groups of genetic markers for bipolar disorder that may assist in the development of drug treatments using data from the Wellcome Trust Case Control Consortium. The authors found a group of markers in the CACNA1C gene, which encodes the alpha subunit of the calcium channel CA_v1.2. The authors note that a number of drugs have been trialled in bipolar disorder that block this channel, and argue that further trials of other currently licensed drugs should be investigated for antagonism of CA_v1.2.

Mood lability in young people

Stringaris & Goodwin (pp. 1237–1245) review findings on the prevalence and characteristics of mood lability derived from a UK mental health survey of 5326 children and adolescents aged 8–19 years. The authors found a prevalence of lability of over 5%. Further, mood lability was associated with a range of psychopathologies and functional impairments, even in the absence of a psychiatric disorder. In addition, the authors further found that mood lability was particularly associated with co-morbidity of internalizing and externalizing disorders.

Bipolar disorder

In the first of five papers on aspects of bipolar disorder, Coryell *et al.* (pp. 1247–1252) examined the persistence of symptoms across age groups during the course of bipolar I disorder in a sample of 148 individuals who were followed over a 20-year period. Having split the sample into three groups according to age at entry to the study, the authors found that the persistence of depressive symptoms increased over time in the two youngest groups (18–29 years, 30–44 years). Earlier age of onset was associated with more depressive symptoms over the follow-up period. The authors conclude that, over time, bipolar disorder appears to be characterized by an increased predominance of depressive symptoms.

Doyle *et al.* (pp. 1253–1263) investigated whether the neurocognitive impairments often seen in paediatric bipolar disorder (BPD) (e.g. processing speed, verbal learning, 'executive' function) index the familial risk

underlying the disorder in a sample of 170 young people with BPD, 118 non-mood-disordered siblings, and 79 controls. Using factor analyses, three factors were identified: (1) processing speed, verbal learning; (2) working memory/interference control; and (3) abstract problem solving. The authors found that, across all domains, those with BPD showed impairments compared to relatives and controls. Unaffected relatives performed worse than controls on problem solving and working memory interference.

Kubota *et al.* (pp. 1265–1275) using a series of cognitive tests and near-infrared spectroscopy, investigated prefrontal cortex (PFC) pathophysiology in a sample of 29 subjects with BPD and 27 controls. The authors found that, on both indices of cortical activation (the tissue oxygenation index and the ratio of oxygenated haemoglobin), there was evidence of a discrepancy in PFC function between verbal and non-verbal processing in those with BPD. The authors conclude that this indicates task-specific abnormalities in the haemodynamic control of the PFC in BPD.

Hall *et al.* (pp. 1277–1287) examined the heritability of mismatch negativity (MMN) and auditory P300 in a sample of 94 twin pairs, 31 bipolar families, and 39 controls. The authors found that both P300 and MMN were heritable, with heritability estimates ranging from 0.21 to 0.80. BPD patients and relatives displayed normal MMN. BPD was, however, associated with reduced P300 amplitude and prolonged latency. The authors conclude that MMN is not an endophenotype for BPD, but that P300 amplitude and latency components are.

McKirdy *et al.* (pp. 1289–1293) investigated the specificity of deficits in extra-dimensional set shifting (EDS) and reversal learning (RL) in a sample of 30 clinically stable patients with schizophrenia, 47 clinically stable patients with BPD and 44 controls. The authors found both groups of patients made more errors on EDS and RL; neither measure distinguished between the groups. The authors conclude that the data, for both patient groups, are consistent with disrupted networks involving the ventral prefrontal cortex.

Suicide

In the first of three papers on aspects of suicide, Dupéré *et al.* (pp. 1295–1306) examined the association between neighbourhood poverty and suicidal behaviours in young people, while controlling for background vulnerability factors, in a sample of 2776 individuals drawn from the Canadian National Longitudinal Survey of Children and Youth. The authors found that suicidal thoughts were around two-times, and suicide attempts around

four-times, more common in poor neighbourhoods. These associations were independent of vulnerability factors and psychosocial risks (e.g. social support, life events).

Cougnard *et al.* (pp. 1307–1315) used a decision analysis method to estimate the number of suicides that would be prevented or induced by antidepressant drug treatment (ADT) in a sample of children and adolescents (aged 10–19 years), adults (aged 20–64 years) and older subjects (aged ≥ 65 years). The authors found that prescribing ADT to all patients diagnosed with depression would prevent one out of three suicide deaths compared with a no-ADT strategy, irrespective of age, gender or past parasuicide.

Suryani *et al.* (pp. 1317–1323) investigated the relationship between the Bali (Indonesia) bombings of October 2002 and risk of suicide by comparing suicide rates in the 6 years before and 4 years after the bombings. The authors found that age-adjusted rates in men increased from 2.84/100 000 in the period pre-2002 to 8.10/100 000 post-2002. For women, the respective rates were 1.51 pre-2002 and 3.68 post-2002. Adjustment for tourist arrivals (which declined post-2002) accounted for some of the change over time. The authors conclude that the economic consequences of a decline in tourism may account for some, but not all, of the increase in suicide rates.

Attention deficit hyperactivity disorder and autism

Four papers examine aspects of attention deficit hyperactivity disorder (ADHD) and aspects of autism. In the first, Antshel *et al.* (pp. 1325–1335) investigated the validity of diagnosing ADHD in high-IQ (≥ 120) adults in a sample of 64 adults with ADHD and a high IQ and 53 adult controls with a high IQ. The authors found that those with ADHD displayed similar impairments (compared with controls) to those seen in average IQ adults with ADHD, e.g. lower quality of life, poorer family and occupational functioning and more depressive and anxiety disorders. The authors conclude that these data support the validity of a diagnosis of ADHD in high IQ adults.

Bálint *et al.* (pp. 1337–1345) report findings from a meta-analysis of 25 studies in which neurocognition was compared between adults with ADHD and controls. The authors found that, in comparisons between those with ADHD and controls, tests of focused and sustained attention yielded medium to large effect sizes, while tests of simple attention yielded small to medium effect sizes. The authors conclude that adults with ADHD show poorer functioning on complex but not simple tasks of attention.

Jou *et al.* (pp. 1347–1354) investigated grey- and white-matter volumes in 22 children with autism and 22 age- and gender-matched controls. The authors found that there were no differences in total brain volumes between cases and controls, and no differences in white-matter volume. However, a decrease in brainstem grey-matter volume was found in the children with autism. This decrease was associated with oral sensitivity (assessed using the Sensory Profile Questionnaire). The authors conclude that

these findings are suggestive of brainstem abnormalities in autism involving grey-matter structures, which may be important in the sensory dysfunction observed in autism.

Dubischar-Krivic *et al.* (pp. 1355–1363) sought to identify the cognitive processes that distinguish calendar calculation in savant individuals from health calendar calculators. In a sample comprising four groups (savant calendar calculators with autism, $n=3$; health calendar calculators, $n=3$; non-savant individuals with autism, $n=6$; and healthy calendar calculator laypersons, $n=18$), the authors found that savant individuals with autism showed: (a) shorter reaction times and fewer errors; and (b) faster and more accurate calculation of past dates. The authors conclude that distinct strategies may be employed: reliance on calendar regularities in healthy individuals and rote memory in savant individuals with autism.

Other topics

In the first of three final papers, Glantz *et al.* (pp. 1365–1377) used simulations to estimate the number of substance disorders that could be prevented in those with a mental disorder under a number of hypothetical intervention scenarios. Using data from the National Comorbidity Survey Replication, the authors found that the number of cases of mental disorder that would need to be treated to prevent a single case of substance dependence was so high (between 76 and 177 for anxiety-mood disorders; between 40 and 47 for externalizing disorders) that this would not be a cost-effective strategy to reduce substance disorders.

Fear *et al.* (pp. 1379–1387) examined the correlates of post-concussional syndrome (PCS) in a sample of 5869 UK military personnel deployed to Iraq. The authors found presence and severity of PCS symptoms were associated with self-reported exposure to a blast while in a combat zone. However, these outcomes were also associated with other in-theatre exposures (e.g. aiding the wounded) and other health outcomes (e.g. post-traumatic stress disorder). The authors conclude that the association between PCS and exposure to a blast is non-specific, which creates challenges in post-deployment screening for PCS.

In light of new legislation in the UK requiring assessment of mental capacity, Owen *et al.* (pp. 1389–1398) sought to identify associations between mental capacity and variables more familiar to clinicians, such as insight. In a sample of 200 consecutive admissions to the Maudsley Hospital in London, the authors found that psychotic disorders and mania were most strongly associated with mental incapacity, with insight being the best discriminator of capacity status. In those with non-psychotic disorders, depressed mood was the best discriminator of capacity status.

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