Biological markers and psychotherapeutic interventions for depression

Two papers in the BJPsych this month investigate brain imaging markers in relation to depression outcomes. On the basis that late-life depression has previously been found to be associated with white matter changes on region of interest brain imaging, Reppermund et al (pp. 315–320) utilised diffusion tensor imaging and tract-based spatial statistics to examine white matter integrity in a sample of older adults, twice over a 2-year period. Those with current depression had widespread integrity reduction compared with those without depression, with abnormalities particularly apparent in the frontal lobe, association and projection fibres. The authors also found that white matter integrity reduction in a number of specific brain regions predicted later depression at follow-up, indicating potential as a biomarker for such an outcome. The ability of diffusion tensor imaging findings to predict outcome in depression was also examined by Korgaonkar et al (pp. 321–328), this time in the context of predicting treatment outcomes in a sample of individuals with major depressive disorder being treated in an out-patient setting. Taking demographic and clinical measures into account, altered connectivity in the cingulum part of the cingulate and stria terminalis tracts predicted remission for those receiving an 8-week course of antidepressant treatment.

Although subclinical depression is common and known to be associated with a range of adverse outcomes, clinical decisions about appropriate treatment are hampered by uncertainty and controversy regarding the evidence for effectiveness. Cuijpers et al (pp. 268–274) conducted a meta-analysis of 18 controlled trials of psychological treatment for subclinical depression. They found evidence for a small to moderate effect of psychotherapy on depressive symptoms and a significant impact on incidence of major depression. The authors found the studies to be limited in quality and to vary considerably with regard to characteristics such as the nature of the sample and therapy. The authors noted that the effects found were significantly smaller than those found for psychotherapy when used to treat major depressive disorder.

Longitudinal studies – of both psychiatric resilience and predictors of poor outcome

Variability in response to stressful life events is well established but is poorly understood, particularly the mechanisms underlying resilience to such events. Utilising a longitudinal twin study design, Amstader et al (pp. 275–280) found that the difference between actual level of internalising symptoms and that predicted on the basis of the occurrence of life events (resilience) was underpinned by both genetic and enduring environmental influences, with the effects being roughly equal in impact. In a commentary on the paper, Wertz & Pariante (pp. 281–282) discuss the extent to which the findings could inform development of interventions to enhance resilience after exposure to stressful life events and call for future research to consider a broader range of resilience domains on the basis that, for example, individuals may be resilient to developing psychiatric ill health in response to adversity but not to the development of physical ill health.

Two papers in the BJPsych this month present findings from longitudinal studies examining population-level predictors of mental health outcome. Using a quasi-experimental family-based study, Sariaslan et al (pp. 286–290) found that childhood family income was not associated with criminality or substance misuse in adolescence once adjustment had been made for unobserved family risk factors. The authors argue that claims of causality based on studies of such associations using traditional epidemiological methods with simple adjustment for covariates should be made with caution. The lack of evidence for causality found when a quasi-experimental family-based design was utilised implies that interventions designed solely to address childhood family income are unlikely to have the desired impact on later risk of criminality or substance misuse. Galéa et al (pp. 291–297) examined predictors of attention-deficit hyperactivity disorder (ADHD) medication use in a population-based birth cohort. In addition to ADHD symptoms, a number of social variables, including low maternal education, were also predictive of ADHD medication. Independent of ADHD symptoms, psychiatric comorbidity, including oppositional features beyond those explained by ADHD status, did not predict medication use, but boys were more likely to receive medication than girls. The authors also comment on the finding that parental immigrant status predicted lower medication use.

Suicide in childhood and in relation to the stigma of mental illness

Addressing the limited research on suicide patterns in children, Kölves & De Leo (pp. 283–285) obtained data from the World Health Organization Mortality Database and the World Bank for 81 countries and territories for those in the population aged 10–14 years. Over the past two decades, the suicide rate for boys in this age group declined slightly (1.61 per 100 000 to 1.52) but for girls the rate increased slightly (0.85 to 0.94). Regional differences were identified and the authors comment on the potential impact of changes in the quality of data from particular regions over the period of observation. In an editorial focused on the impact of the stigma of mental illness on suicidality, Rusch et al (pp. 257–259) argue that more research is needed to understand what is likely to be an important association between stigma and suicidality, one that, significantly, is potentially modifiable.