The Association Between Severe Mental Illness and Receipt of Acute Cardiac Care for Myocardial Infarction, and the Impact of the COVID-19 Pandemic

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Aims. To compare receipt of acute cardiac care in people with versus without severe mental illness (SMI) and investigate the impact of the COVID-19 pandemic on any differences in care. We hypothesised that, compared with those without SMI, patients with an SMI are less likely to receive guideline recommended acute cardiac care and that disparities worsened as a result of the pandemic.

Methods. We conducted a cohort study using data from the CVD-COVID-UK resource, which links electronic health data from multiple sources. Our cohort included 95,125 adults with a non-ST-elevation MI (NSTEMI) recorded in the Myocardial Infarction National Audit Programme (MINAP) dataset between 1 November 2019 and 31 March 2022. We defined SMI as schizophrenia, schizoaffective disorders or bipolar disorder (BD), ascertained through recorded diagnosis in primary care or hospital admission records. We examined receipt of cardiac care standards for NSTEMI, including: admission to a cardiac ward; angiogram eligibility; receipt of angiogram (in those eligible); angiogram within 72 hours; secondary prevention medication prescribing at discharge; and arrangement of post-discharge cardiac rehabilitation. We used logistic regression to obtain odds ratios (ORs) for the association between SMI and receipt of each care indicator, adjusting for age, sex and time period. We tested for an interaction between SMI and time period in order to determine if any disparities had changed since the start of the COVID-19 pandemic.

Results. Within our cohort, 620 patients (0.6%) had schizophrenia and 575 (0.6%) had BD. Compared with people without SMI and after adjusting for age, sex and period, patients with an SMI were less likely to receive each of the cardiac care standards. For example, compared with those without SMI, those with SMI were less likely to: be admitted to a cardiac ward (schizophrenia: OR 0.72, 95% CI 0.61–0.85; BD: 0.74, 95% CI 0.63–0.88); be eligible for an angiogram (schizophrenia: 0.37, 95% CI 0.29–0.47; BD: 0.52, 95% CI 0.40–0.68); receive an angiogram (schizophrenia: 0.22, 95% CI 0.18–0.28; BD: 0.51, 95% CI 0.39–0.66); and receive an angiogram within 72 hours (schizophrenia: 0.71, 95% CI 0.56–0.90); BD: 0.80, 95% CI 0.64–1.00). We generally found no evidence that disparities had changed since the start of the COVID-19 pandemic.

Conclusion. We identified marked SMI disparities in receipt of acute cardiac care among people treated in hospital for a NSTEMI. Further research should seek to identify reasons for, and inform interventions to, address these disparities.

Pre-operative Mental Health and Adverse Outcomes Following Total Knee Replacement: A Prospective Cohort Study

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Aims. Total knee replacements (TKRs) are effective procedures for severe osteoarthritis. Some studies suggest that people with common pre-operative mental health problems are more likely to experience complications following joint replacement. This study aimed to determine whether people who described pre-operative anxiety or depression were more likely to report an adverse event, or outcome, following a TKR.

Methods. A prospective cohort of people undergoing TKR at a surgical centre in England between 2012–2013 as part of service evaluation were studied. Following informed consent, participants completed pre-operative sociodemographic questionnaires alongside several patient-reported outcome measures (PROMs): the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), EuroQoL Five-dimensions Descriptive System (EQ-5D-3L), and the Self-Administered Patient Satisfaction Scale for Primary Knee Arthroplasty. Participants were classified as exposed if they described moderate or extreme problems with anxiety or depression in the mental health subset of the EQ-5D-3L. The primary outcome was the presence of a patient-reported adverse event (bleeding, infection or fracture) at 3 months post-surgery measured through a short postal questionnaire. Repeat PROMs were assessed at 3- and 12-months post-surgery. Logistic regression was used to model the association between pre-operative mental health status and probability of an adverse event, or outcome, occurring following adjustment for age, sex and body mass index.

Results. Of the 206 individuals studied, over a third (n 72/206, 35%) had reported problems with anxiety or depression before surgery. Among those returning completed follow-up questionnaires, 20% (n 34/168) described an adverse event at 3 months. Pre-operative anxiety or depression was not associated with an increased odds of reporting an adverse event (aOR 0.85, 95% CI 0.35–2.05) at 3 months post-surgery. People who described problems with anxiety or depression were more likely to have a greater degree of pre-operative functional impairment. Even after adjusting for a higher pre-operative symptom burden, exposed participants were more likely to report problems with activities of daily living (aOR 2.32, 95% CI 1.09–4.94) and pain or discomfort (aOR 5.58, 95% CI 1.77–17.60) at 3 months post-surgery. However, they did not have an increased odds of describing worse function, reduced health-related quality of life, or being dissatisfied with their TKR at 12 months post-surgery.

Conclusion. Despite having a higher burden of morbidity prior to undergoing surgery, pre-operatively anxious or depressed participants did not have an increased odds of reporting an adverse event at 3 months and went on to experience comparable improvements in PROMs at 12 months post-surgery.

Modafinil in Post-Traumatic Brain Injury Apathy: A Sleeping Giant?

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Aims. Apathy is a complex clinical, neurobehavioural and neurobiological construct that occurs across a range of neuropsychiatric disorders. Apathy is defined as persistent, diminished motivation with impairments in goal-directed behaviour, thought, cognitive activity and emotions. Apathy negatively impacts on participation/engagement in rehabilitation and community reintegration, quality of life, and increased occupational and economic burden on families and traumatic brain injury (TBI) patients. Apathy is among the most common sequelae of TBI, with prevalence estimated to be in excess of 10%, and up to 60% in comorbid depression and apathy.

There is no standard treatment for apathy, although anecdotal evidence suggests that Modafinil may be effective. Current pharmacological management strategies focus on addressing the comorbidities associated with it: e.g. acetylcholinesterase inhibitors to treat both Alzheimer's disease and apathy; dopaminergic agonists for Parkinson's disease and apathy; and antidepressants for depression and apathy.

This literature review will assess the clinical evidence of Modafinil, and recommended use for treating post-TBI apathy.

Methods. An extensive search was conducted in the major databases, PsychInfo, Cochrane, Europe PMC, PubMed, EMBASE and MEDLINE, to evaluate Modafinil treatment for apathy in TBI patients. Additionally, the literature review included extra sources found in the citations. Out of 70 citations, only one was accepted for further analysis. The remaining citations were rejected due to their ineligible abstracts, absence of pharmacological interventions, inclusion of non-TBI apathy and being non-English language articles.

Results. The accepted paper did not meet Level III evidence or better following analysis.

The review however identified case reports suggesting the potential effectiveness of Modafinil in treating post-TBI apathy.

Although the exact mechanism of action of Modafinil remains unclear, it is associated with improvement in working memory, attention and prefrontal-dependent cognitive function. This improvement is linked to elevated levels of extracellular dopamine, norepinephrine, serotonin, glutamate and histamine, as well as decreased GABA levels. Modafinil activates the anterior cingulate cortex, and shows positive correlation with cognitive improvement. Neuroanatomically, there is a strong association between apathy and disruption of the cortico-basal ganglia loop, involving the dorsal anterior cingulate cortex, ventral striatum and connected brain regions. Modafinil possibly has unexplored benefits in improving apathy through activation of the anterior cingulate cortex.

Conclusion. There is limited empirical evidence for effective treatments for post-TBI apathy. This review emphasizes the urgent need for further research that aligns with underlying neuroanatomical pathology in order to determine the most effective psychopharmacological interventions for managing post-TBI apathy.

Investigating History of Suicidal Ideation Among Patients Attending Early Intervention for Psychosis Services: A Retrospective Analysis Using Clinical Records

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Aims. Previous population-based studies have identified suicidal ideation (SI) as a potential risk marker for psychosis. We aimed to investigate the prevalence of previous SI in a large sample of patients with first episode of psychosis accepted to early intervention services (EIS) in South London and Maudsley (SLaM) NHS Foundation Trust using clinical records. We further aimed to investigate differences in patients with and without recorded SI according to age at diagnosis, gender, ethnicity and neighbourhood deprivation.

Methods. We designed a retrospective cohort using the Clinical Record Interactive System. Included were patients who were accepted by SLaM EIS from 2015–2018 and received a psychotic disorder diagnosis (n = 1658). We used a natural language processing algorithm that searches deidentified textual clinical records, returning a binary variable indicating presence or absence of SI recorded at any time prior to acceptance to EIS. The algorithm has high precision (97%) and inter-rater reliability (Cohen's k 92%). The t-test was used to compare mean age at first diagnosis in patients with and without recorded SI, while chi-squared tests evaluated differences according to gender, ethnicity and tertiles of index of multiple deprivation (based on 2015 postcode). The significance threshold was p = 0.05.

Results. The cohort included 1658 patients, of whom 656 (39.6%) were female. The natural language processing algorithm identified 600 patients (36.2%) who had SI recorded in their clinical records at any time prior to acceptance by EIS. On average, patients with recorded SI were younger at first diagnosis of psychotic disorder (mean 27.7 years, standard deviation 10.5) compared with patients without recorded SI (mean 30.1 years, standard deviation 11.2; p < 0.001). There was little evidence for differences on gender (p = 0.950), ethnicity (p = 0.059) or deprivation index (p = 0.597).

Conclusion. Approximately 1 in 3 patients attending SLaM EIS had evidence of SI recorded prior to acceptance by EIS. Consistent with previous studies, the current findings emphasise the high prevalence of SI in this clinical population. Compared with those without SI, patients with recorded SI were on average 2–3 years younger at diagnosis. This may reflect general population age differences in prevalence of suicidal ideation; increased severity of illness with earlier age of onset; or patterns of contact with services which facilitated earlier diagnosis. There was little evidence that patients with and without recorded SI differed significantly on gender, ethnicity or neighbourhood deprivation. Prospective studies would be helpful to assess whether SI is a risk marker for first episode of psychosis.

Systematic Review of Referral and Care Pathways for Children and Young People of Black Ethnicity Through Child and Adolescent Mental Health Services Compared With Other Ethnic Groups: An International Comparison

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