Psychopharmacology during infections, including COVID-19

S0024

The challenges of psychopharmacological treatment during the COVID-19 pandemic in lombardy

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doi: 10.1192/j.eurpsy.2021.62

Introduction: Public Mental Health Services in Lombardy (Italy) has 27 Departments for Mental Health and Addiction Services and a number of private residential facilities. With the reorganization of the entire Healthcare system to deal with COVID-19, Regional Health Authorities recognized mental health as a priority and authorized the continuation of mental health services for the general population.
Objectives: To review the initiatives and procedures implemented in Lombardy during the Covid-19 pandemic in relation to the organization of Psychiatric Services and continuity of psychopharmacological treatment.
Results: Hospital admissions for acute psychiatric disorders in patients positive for COVID-19 required a dedicated area in the psychiatric ward or alternatively, a medical ward supported by psychiatric staff. Psychiatric hospital activity for patients negative for Covid-19 has been maintained as usual. The activity in the Mental Health Centers has been maintained in patients suffering from severe mental disorders as well as in those with serious social problems or judicial sentences. Particular attention was paid to patients' clinical monitoring and drug administration. Long-acting Injection antipsychotics were often preferred to oral treatment to ensure adherence and continuity of care. Appropriate e-health technologies were used to reach patients and their families, for monitoring patients and avoiding drop-outs of patients with serious diseases.
Conclusions: Maintaining continuous monitoring of patients in contact with mental health services is essential for a careful assessment of their condition from both a psychopathological and medical point of view during pandemic.

Disclosure: No significant relationships.
Keywords: Mental disorders; Psychopharmacology; COVID19

S0023

The interactions between COVID-19 drugs and psychotropic agents

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doi: 10.1192/j.eurpsy.2021.63

Coronavirus disease (COVID-19) is a systemic infection targeting multiple organs. Interstitial pneumonia is the landmark feature of this condition. Severe acute respiratory symptoms requiring intensive care support arises for about one out of twenty symptomatic cases. Aminochinolone, antiviral, antibiotic, corticoid, anticoagulant and immunobiological drugs are used, mostly to treat symptoms. Only remdesivir exhibiting weak antiviral activity is approved for COVID-19. Psychotropic medications may interact with medical treatments for COVID-19. The aim of this presentation is to highlight pharmacokinetic and pharmacodynamic drug-drug interactions to be expected for medical treatments of COVID-19. Remdesivir and favipiravir exhibit hepatotoxic properties which may be enhanced under combinations with tricyclic antidepressants or agomelatine. Favipiravir, hydroxychloroquine, chloroquine, azithromycin, lopinavir/ritonavir have QT interval prolongation potential and must be considered for combinations with antidepressant and antipsychotic drugs. For hydroxychloroquine, hypoglycemic activity may give rise to endocrine disturbances. Pharmacokinetic drug-drug interactions can be expected for lopinavir/ritonavir which inhibit cytochrome P-450 (CYP) 3A4 and induce CYP2C9 and CYP2C19. Combinations with psychotropic drugs that are substrates of these enzymes (victim drugs) will affect drug concentrations in blood and lead to supra- or subtherapeutic levels. Moreover, it must be assumed that the COVID-19 infection is associated with an enhanced production of cytokines which has a known impact on CYP enzyme activities. Though studies on interactions between psychotropic medications and medical treatments for COVID-19 are lacking, multiple drug interactions can be predicted and expected considering the side effect profiles and CYP inhibitory, inducing and substrate properties of combined drugs.

Disclosure: No significant relationships.
Keywords: COVID-19; drug-drug interactions; pharmacokinetic; pharmacodynamic

S0024

The pharmacotherapy of infections in patients with mental disorders receiving psychotropic drugs: Focus on good practices

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doi: 10.1192/j.eurpsy.2021.64

There is little data on infection treatment in patients with mental disorders, including on the selection of psychotropic, antibiotic, antifungal, and antiviral medications. Bacterial, viral, and fungal infections often occur in patients with mental illnesses, and there is little data on rational pharmacotherapy in this vulnerable population. Antibiotic treatment is a common event during hospitalization in adult psychiatric hospitals and poses a risk of significant potential to almost a quarter of all patients. Most infections are bacterial infections where antibiotics are used, and this topic will be covered in this lecture.
Most patients are being treated for urinary tract infections or respiratory tract infections. The most commonly prescribed antibiotics are co-amoxiclav and cotrimoxazole, followed by ciprofloxacin and nitrofurantoin. Drug-drug interactions (DDIs) between antibiotics and psychotropics often occur, where medications with QTc prolongation potential should be avoided (e.g., some

antipsychotics and antidepressants, quinolones, and cotrimoxazole). Penicillins are the most appropriate group, and quinolones should be avoided. DDIs between antibiotics and psychotropic drugs have been reported to occur in 20% of patients, which means that DDIs checking is always necessary before prescribing. Psychiatric adverse events (e.g., hallucinations, restlessness, insomnia) have also been seen in patients with mental disorders.
The participants will learn about general recommendations on antibiotic prescribing in this population, focusing on antibiotics and psychotropics, supported by evidence-based data and real clinical pharmacological tools useful for daily practice.

Disclosure: No significant relationships.
Keywords: Infections; Antibiotics; Hospitals and Ambulatory Setting; Psychopharmacology

Predicting the outcomes in psychosis: Recent advances in molecular profiling, neuroimaging and machine learning

S0026

Predicting one-year outcomes in first-episode psychosis

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doi: 10.1192/j.eurpsy.2021.65

The outcome of first-episode psychosis (FEP) varies and may be predicted by several baseline measures. In the Helsinki Early Psychosis Study, young adults with FEP (n=97) from the Helsinki area in Finland were broadly assessed as soon as possible after first psychiatric contact for psychosis. Age- and gender-matched population controls were also assessed (n=62). The participants were followed up via appointments and medical records. We present both published and unpublished results on predictors of 12-month clinical, functional, and metabolic outcomes. More severe cognitive deficits at the beginning of treatment predicted several outcomes such as occupational status and functional level – beyond baseline positive and affective symptom levels, but not when negative symptoms were accounted for. More severe baseline obsessive-compulsive symptoms were predictive of a lower rate of remission, whereas a higher level of anxiety symptoms predicted better functional outcome, when the severity of positive symptoms was adjusted for. Adverse childhood experiences measuring cumulating psychosocial stress did not predict occupational status or functional level when positive and negative symptoms and neurocognition were controlled for, whereas in controls having experienced school bullying was associated with lower functioning. Insulin resistance in early psychosis appeared as an early marker of increased vulnerability to weight gain and abdominal obesity in young adults with FEP. Further, increased waist circumference predicted worsening low-grade inflammation, increasing further the cardiovascular risk. In sum, we have found different types of prognostic markers in FEP. Identifying the individuals at risk of less favorable outcomes could affect treatment choices in FEP.

Disclosure: No significant relationships.
Keywords: Psychotic disorders; remission; follow-up; outcome

S0028

Molecular lipids in prediction of psychosis and the associated cardiometabolic co-morbidities

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doi: 10.1192/j.eurpsy.2021.66

Lipid metabolism has been an area of increased interest in psychosis research, not only due to its link to metabolic comorbidities, but also due to its putative role in the pathophysiology of psychosis. Lipid disturbances are observed already in the period preceding the onset of psychosis. For example, we performed mass spectrometry based lipidomics in a cohort of individuals at clinical high risk for psychosis (the EU-GEI study) and found that the individuals who transitioned to psychosis within a 2-year follow-up period displayed decreased levels of ether phospholipids. This finding may be of direct (patho)physiological relevance, as ether phospholipids (particularly plasmalogens, a major subgroup of ether phospholipids) are highly enriched in the brain, are supplied to the brain by the liver, have many structural and functional roles, and may act as endogenous antioxidants. Accumulating evidence also suggests that lipid disturbances play a crucial role in the development of metabolic comorbidities associated with psychotic disorders. Our lipidomic studies have shown that psychotic patients who rapidly gain weight during follow-up have elevated triglycerides (TGs) with low double bond count and carbon number at baseline. These TGs are known to be associated with non-alcoholic fatty liver disease (NAFLD) and with increased risk of type 2 diabetes. In conclusion, although the mechanisms linking dysregulation of lipid metabolism with the pathophysiology of psychosis are currently poorly understood, findings by us and others suggest that metabolic abnormalities are evident in people who are vulnerable to psychosis, and to the associated metabolic comorbidities.

Disclosure: No significant relationships.
Keywords: lipidomics; psychosis; lipid metabolism; metabolic co-morbidities

Preventing the "hype, hope and disappointment" cycle in early intervention of psychosis

S0029

Early intervention in psychosis: An innovation trigger in a challenging environment

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doi: 10.1192/j.eurpsy.2021.67