

supporting the use of the medications for the three aforementioned disorders.

**Result.** D-cycloserine: accelerates the process of associative emotional learning, enhancing exposure therapy in the treatment of various anxiety disorders, including obsessive-compulsive disorder and posttraumatic stress disorder. Limited studies are available on efficacy in treating SUDs.

Intranasal oxytocin: accelerates memory retrieval-extinction procedures used in posttraumatic stress disorder, and promotes prosocial cognition and behaviour, facilitating a therapeutic alliance. Sufficiently powered studies and safety studies are required before strong conclusions can be made.

Propranolol: interrupts the reconsolidation of memories (leading to maladaptive learned responses) involved in posttraumatic stress disorder during memory-reactivation therapy sessions, but there is little evidence that this drug can be used for depression or SUDs.

Psychedelics: may effect the brain's default mode network, engendering a transformative experience that is often followed by a reduction in psychiatric symptoms. 3,4-methylenedioxymethamphetamine may additionally modulate the amygdala response in a way that allows for reprocessing of traumatic memories, and improves the therapeutic alliance. Anxiety, mood, and SUDs appear to be positively influenced by traditional and non-traditional (ketamine) psychedelics.

**Conclusion.** Although the efficacy of the medically-assisted psychotherapies reviewed is still under investigation, we propose that these novel treatment approaches may be preferred over traditional psychopharmacological treatments due to the presence of fewer chronic side effects, as well as less toxicity and abuse potential. Furthermore, these adjunctive pharmacotherapies may help to reinforce the psychotherapeutic alliance and may ultimately yield better long-term treatment outcomes. If at least some of the adjunctive pharmacotherapies outlined in this review are found to be clinically efficacious and safe, patients will benefit from having more treatment options available to them in the future.

## Potential drug targets in the kynurenine pathway to treat acute schizophrenia

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**Aims.** Schizophrenia is a serious developmental psychiatric disorder with a neurodegenerative component that causes marked deterioration in social relationships and ability to work. Present treatments are not satisfactory. Meta-analysis of placebo-controlled studies in acute schizophrenia shows that only a minority of patients have a good response to current antipsychotic medications. Therefore, there is a need for more effective psychopharmacologic treatments for this disorder.

**Method.** The purpose of this paper is to provide new interpretations of existing data to provide a scaffolding for the development of novel drug targets for the treatment of schizophrenia. The causes of schizophrenia are most likely heterogeneous and involve both genetic and environmental factors. The authors examined a wide range of purported causes of schizophrenia to identify a common biochemical pathway that would contribute to this disorder. This review specifically did not consider pathways that supported the dopamine hypothesis of schizophrenia since historically

drugs focused on dopaminergic mechanism, as noted in the aims, have not been successful for many patients with schizophrenia.

**Result.** Two prominent schizophrenia-associated factors that have been widely studied with significant supporting evidence are stress and inflammation. Stress and inflammation share a common biochemical pathway that converges on the kynurenine pathway of the metabolism of tryptophan, an essential amino acid. At one end of the pathway, recently hospitalized patients with schizophrenia have been found to have low plasma tryptophan levels, whereas chronic schizophrenics have not, suggesting stress- and/or inflammation-induced increased metabolism of tryptophan. At the other end of the pathway, there is increased level of cerebrospinal fluid kynurenic acid in patients with schizophrenia as compared with healthy controls. Salivary kynurenic acid is associated with stress intolerance in schizophrenia. Importantly, natural occurring compounds in this pathway have significant CNS effects that include neurotoxicity and altered neural transmitter behavior.

**Conclusion.** Stress and inflammation, both associated as causes of schizophrenia, are linked by a common biochemical pathway involving kynurenine. Examination of specific elements of the kynurenine pathway may aid in the identification of drug targets for schizophrenia.

## A narrative review of the pharmacological management of psychosis in Alzheimer's disease

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**Aims.** Dementia is estimated to affect 50 million people worldwide, with around 60% of these cases attributable to Alzheimer's disease (AD). One of the common behavioural and psychological symptoms associated with AD is psychosis. Psychosis, experiencing delusions or hallucinations, can be one of the most distressing ordeals for patients with AD, as well as those around them. Effectively managing these symptoms can lead to a vast improvement in life quality. Currently, there are no medications specifically licensed in the UK for the treatment of psychosis in AD. To help guide clinical practice, we reviewed the evidence underpinning the pharmacological treatment of psychosis in AD. The aim of the study was to positively influence clinical practice and thereby improve the life quality of this patient group.

**Method.** An advanced PubMed search was used to identify studies which investigated the pharmacological treatments for acute psychosis in people with AD. Papers included were double blind, placebo controlled, randomised controlled trials specifically for AD dementia. Papers must have reported their findings using a specific psychosis subscale (PS); examples being "Behavioural Pathology in AD" (BEHAVE-AD-PS), "Brief Psychiatric Rating Scale" (BPRS-PS), and "Neuropsychiatric Inventory - Nursing Home Version" (NPI-NH-PS). Populations of both outpatients and residential patients were accepted. 14 papers, comprising some 3237 patients, were included and critically analysed in the final review.

**Result.** Risperidone (BEHAVE-AD-PS: -1.3 [p = 0.004] & -1.9 [p = 0.039]; BPRS-PS: -0.5 [p = 0.08]) and aripiprazole (NPI-NH-PS: -1.0 [p = 0.169] & -1.8 [p = 0.013]) successfully reduced psychosis symptoms in patient populations. However, these medications were associated with a statistical increase in severe adverse

events including strokes and cognitive decline. Pimavanserin (NPI-NH-PS: -1.9 [ $p = 0.045$ ]) also offered a notable reduction in psychosis symptoms, but was associated with increased agitation/aggression. Whilst commonly used in clinical practice, quetiapine, olanzapine, and haloperidol showed negligible therapeutic changes compared to placebo using multiple psychosis subscales. Olanzapine and haloperidol were associated with increased rates of severe adverse events including extrapyramidal symptoms. Quetiapine showed limited side effects.

**Conclusion.** Risperidone and aripiprazole offer effective means to help AD patients cope with psychosis, but these medications also come with an increased risk of developing life-threatening complications. They should, therefore, be administered judiciously. Pimavanserin shows early promise in treating this group of patients, with no life-threatening adverse effects associated with its use. Further research is required before endorsing the use of pimavanserin. There is little evidence to support the therapeutic use of quetiapine, olanzapine, and haloperidol in this patient population. No financial sponsorship declared.

## Quality Improvement

### Mind and body: physical health monitoring in clozapine treatment

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**Aims.** To evaluate physical health monitoring standards in patients on Clozapine in the community.

Standards

NICE and BNF guidelines for patients on established clozapine treatment advise annual monitoring of weight, waist circumference, pulse, blood pressure, fasting blood glucose, HbA1c, blood lipids and overall physical health assessment. Full blood count is monitored 1-4 weekly.

**Background.** In the management of schizophrenia, antipsychotic medication remains the cornerstone of treatment. Patients affected carry a significant physical health burden with a reduced life expectancy of 10-25 years. Factors that contribute include sedentary lifestyles, consequent obesity and cardiovascular disease, disengagement from health services, a higher incidence of suicide and the physical side effects of antipsychotic medication. For these reasons, comprehensive routine physical assessment of patients on antipsychotic treatment is of central importance.

**Method.** This audit is a retrospective study of patients known to South Kensington & Chelsea Community Mental Health Team (CMHT). Patients ( $n = 48$ ) were audited from the Clozapine clinic SystemOne database over a one year period (October 2018-2019) to assess annual monitoring of full blood count (FBC), urea and electrolytes (U&Es), lipid profile, liver function tests (LFTs), HbA1c, thyroid function tests (TFTs), clozapine levels, ECG, and general physical and mental health review.

**Result.** Of the 48 patients, one was transferred to a different service so was excluded ( $n = 47$  total).

All (100.0%) of the patients had annual FBC tests. All but one (97.9%) of the patients had a physical health review including blood pressure, pulse, weight and BMI measurement. Three quarters (74.5%) received annual U&Es and LFTs. Almost two thirds of patients had annual lipid and HbA1c screening (63.8%) and

over half the cohort had annual TFTs (61.7%). Regarding annual multidisciplinary mental health review, this was performed for the majority of the patients (70.2%).

Contrastingly, only a quarter of the patients received annual screening of glucose and Clozapine levels (27.7% for both). Only 12 patients had annual ECG (25.5%).

**Conclusion.** Following review it is clear that most parameters were monitored annually in a majority of patients. However, shortcomings were detected, specifically annual ECG and waist circumference monitoring.

In order to ensure comprehensive monitoring of mental and physical health of patients on Clozapine, flow charts of tests and reviews needed for each patient were written up clearly and will be included in the management pathway for every patient on Clozapine. This was agreed to minimise missing any step, particularly annual ECGs.

### Transition of young people from CAMHS to AMH 2017-19

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**Aims.** Transition from CAMHS to AMH is recognised as a potential struggle for young people who suffer with poor mental health. In response to the 2017-19 NHS CQUIN project, LPT organised a monthly working group to establish the best transition process & deliver the CQUIN project.

**Background.** It is estimated that more than 25,000 young people transition each year. It is reported that this process is often handled poorly, which can result in repeat assessments and emergency admissions for this large cohort of service users at a critical stage in life. The result is that young may go on to develop more severe problems in the absence of an appropriate transition service.

**Method.** Cohort of service users eligible for transition (17yrs 6months) was identified. They were referred from CAMHS to AMH with a transition plan and referral letter. A face-to-face transition meeting was arranged which included the patient, carer & clinicians from sending & receiving services. A clinical audit was completed to ensure that care was transferred to AMH post-18th birthday of the patient. The process was followed up by pre- and post-transitions surveys.

**Result.** From 110 identified service users 46% had joint-agency transition meeting and 79% had transition plan in place. 72% felt prepared to transition to AMH and 89% felt their transition goals were met. Positive comments have been received from service users.

**Conclusion.** Link workers were identified to facilitate the transition process. Flow chart was established and disseminated across LPT. Services that need an improvement will be targeted and monitored. LPT will host an event for patients and carers to involve them in enhancing the transition process.

### Transition from child and adolescent mental health services to adult mental health services: children in care and adopted children

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