connections between the hindbrain and forebrain through the cerebellum-cerebrum cortex loop, responsible for cognitive function within the hindbrain. This can lead to inappropriate treatment plans being devised for patients, and subsequent negative impact on management outcomes and even quality of life.



## Manganism – Unusual Presentation at Memory Assessment Service

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**Aims:** More than 200,000 clients are referred to memory assessment annually in the United Kingdom. Alzheimer's disease and vascular brain injury are found to be the main causes for the memory impairment among these clients. However, a minority of clients present with memory impairment due to metabolic causes.
**Methods:** Mr M, a 65-year-old Caucasian male was referred to memory assessment service due to memory problems for 7 months duration. He had evidence of amnesia, aphasia and apraxia. His executive functions, recognition, personality were intact. He scored 91/100 in Addenbrooke's cognitive examination. M also struggled with balance and tremors of his limbs.

He was diagnosed with liver impairment secondary to metabolic syndrome, type II diabetes, hypertension, long-standing cervical pain and heart block. He reported to sleep more than usual and was suffering from frequent episodes of constipation which was exacerbated by morphine. His partner reported that his cognitive symptoms coincides with constipation.

M was on treatment for mixed anxiety and depressive disorder with sertraline for 4 years. He was euthymic at presentation.

His laboratory work showed mild anaemia and low platelets. He was known to have a platelet disorder as well. Most recent HbA1c was raised but other basic blood investigations were largely within normal ranges.

His magnetic resonance imaging scan showed Symmetrical T1 high signal in bilateral globus pallidus on sagittal T1 weighted images. It was concluded that appearances could be due to manganese deposition consistent with history of hepatic dysfunction.

Small vessel ischaemic changes were seen in bilateral supra-tentorial white matter.

His electro encephalogram was in keeping with diffuse cerebral dysfunction.

Neurology multi-disciplinary meeting has concluded that the clinical presentation is one of a hepatic encephalopathy.
**Results:** Human physiological functions require many essential elements and manganese is identified as an essential element. Accumulation of manganese in excessive amounts in brain due to various metabolic derangements can causes central nervous system dysfunction known as Manganism. Manganism is an extrapyramidal disorder characterized by motor disturbances associated with neuropsychiatric and cognitive disabilities similar to Parkinsonism.

Manganese is cleared from the body by the liver. Chronic liver impairment hinders the clearing process causing accumulation of manganese in blood and brain. M was suffering from chronic liver impairment which was the most likely cause for manganese deposition in his brain.
**Conclusion:** It was concluded that M's cognitive impairment was due to hepatic encephalopathy and Manganism. Clinicians need to be aware of Manganism while assessing the patients with chronic liver impairment and neurocognitive dysfunction.

Abstracts were reviewed by the RCPsych Academic Faculty rather than by the standard *BJPsych Open* peer review process and should not be quoted as peer-reviewed by *BJPsych Open* in any subsequent publication.

## Levetiracetam Induced Psychosis – A Case Study

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**Aims:** Levetiracetam is a broad spectrum antiepileptic used in a variety of seizure disorders in both adults and children. Although a popular antiseizure medication, levetiracetam's association with new onset behavioural disturbance such as agitation, hostility, psychosis and mood symptoms has been widely reported in scientific literature. Seizure disorders themselves can present with psychiatric manifestations. We are reporting a case of an adolescent male where the interphase of physical and mental health came into play.
**Methods:** A 13-year-old male presented to A&E brought by his family following a referral from the epilepsy clinic due to two weeks history of bizarre behaviours including abnormal gait, tapping on the shoulders of his family members, talking to himself and generally being more irritable. From history, we noted he had been diagnosed with epilepsy (unspecified) for two years and recently his seizure activities increased in frequency, which prompted his neurologist to increase his antiseizure medication (levetiracetam from 1250 mg twice a day to 1500 mg twice a day) two weeks prior to his presentation, which coincided with the onset of his symptoms.

He reported experiencing intrusive and unpleasant thoughts about the safety of his family, experiencing multiple times of the day and to reduce the anxiety he was tapping on their shoulder, and checking the locks of the door and windows of the house, the thoughts and rituals corresponded to obsession and compulsion. He also reported thought broadcasting – people are able to know what he was thinking, and abnormal perception of hearing his own thoughts spoken aloud – appeared to be Gedankenlautwerden.

In the emergency department he underwent extensive blood (including auto-antibodies associated with first episode of psychosis) and radiological investigations to rule out acute neurological causes. The investigations did not yield any positive results, his levetiracetam level was also within therapeutic range.

The description of his seizures indicated that he experiences gustatory and olfactory auras with focal to generalised seizures followed by postictal transient paresis of the left arm, which has been consistent over the course of the two years he had the seizure.
**Results:** Diagnostic formulation was the acute onset obsessive-compulsive and psychotic symptoms are likely the direct result of the increase in the dose of levetiracetam which had a temporal relationship, differentials included psychiatric symptoms associated

with epilepsy: we queried temporal lobe, and a functional psychotic illness. We advised for a medication review, and his levetiracetam was reduced to a prior dose and lamotrigine was added on by the epilepsy clinic.
**Conclusion:** Two months after the presentation we received a letter from his paediatrician mentioning his psychiatric symptoms have improved and the add-on medication managed to control his seizure.



## Case Report: The Injectable Contraceptive as a Contributing Factor to Mental State In a Young Female With Autism Spectrum Disorder and Intellectual Disability

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**Aims:** This case study explores the psychiatric and physical health complexities in a 28-year-old female service user with Autism Spectrum Disorder (ASD) and Intellectual Disability, focusing on the interplay between neuropsychiatric diagnoses, hormonal treatments, and significant mental health deterioration. It also examines the impact of hormonal changes on mood and behaviour, highlighting potential misdiagnosis of emotional instability versus neurodevelopmental conditions. The service user has a history of polycystic ovary syndrome (PCOS), irritable bowel syndrome, and Benign Rolandic Epilepsy (seizure-free since age 13). She has engaged with mental health services since adolescence, carrying multiple diagnoses including generalized anxiety disorder, post-traumatic stress disorder and emotionally unstable personality disorder (EUPD). Her mental health worsened suddenly and significantly following a switch from an oral progesterone contraceptive to the Depo-Provera injection, prompting inpatient psychiatric care.
**Methods:** A thorough medical and psychiatric evaluation was conducted during the nine-month inpatient admission. This included a mental state examination, routine blood tests, CT head imaging, and extensive collateral history collection. Medication adjustments were made including trials of SNRI and SSRI medication, and multidisciplinary therapeutic interventions were provided. Her Depo-Provera was not re-administered. Her PCOS diagnosis was confirmed and she was started on metformin. A diagnosis of ASD was implemented seven months into the admission and her EUPD diagnosis removed. Her depressive and anxious symptoms were noted to be cyclical, worsening before her menstruation. Following MDT review, she was started on an oral contraceptive with good evidence in pre-menstrual syndrome and PCOS (estradiol with nomegestrol)
**Results:** The service user presented with severe depression, anxiety, and active suicidal ideation, including multiple attempts to leave the ward to act on her plans. Initial physical and neurological workups were unremarkable. The pre-admission switch to Depo-Provera was identified as a likely contributing factor to her deterioration, as no other psychosocial triggers were found. She was subsequently detained under the Mental Health Act due to ongoing suicidality. Despite intensive psychiatric and therapeutic interventions, her mood remained persistently low – however after initiating an appropriate contraceptive, her symptoms showed some stabilization. Her risk of self-harm persisted.
**Conclusion:** This case highlights the potential influence of hormonal changes on psychiatric symptoms in women with complex neurodevelopmental disorders such as ASD. It also raises important considerations about the potential misdiagnosis of personality disorders in neurodivergent individuals and the need for careful management of hormonal treatments in this population. Further research into the hormonal impact on mood disorders in neurodivergent patients is warranted.



## ADHD and Substance Misuse in the Club Drug Clinic: A Case Series

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**Aims:** Attention Deficit Hyperactivity Disorder (ADHD) has a well-established link with substance misuse, with growing evidence that individuals with ADHD are at higher risk of developing addictive behaviours including substance use disorders.

The Club Drug Clinic is a specialised addiction service providing support for individuals experiencing problems related to the use of club drugs. During assessments and reviews, patients presenting with symptoms suggestive of ADHD are formally assessed. Those who are diagnosed with ADHD are then commenced on appropriate treatment.
**Methods:** 15 out of 98 patients (15%) under the service since July 2023 were diagnosed with ADHD by the Club Drug Clinic, all of whom were subsequently commenced on atomoxetine.

Data was collected from patient notes including: age, gender, sexuality and information about their substance misuse. The doses of atomoxetine prescribed as well as side-effects and perceived benefits was also recorded. Information around co-morbid mental illness was also analysed.
**Results:** 87% of patients in this series were male with the majority of patients reporting their sexuality as either homosexual or bisexual which is reflective of the population group served generally by the Club Drug Clinic. The age range of the patients was 24–58 with an average age of 40.

Crystal Methamphetamine was the most frequently used illicit drug with 70% of those diagnosed with ADHD using Crystal Meth in an either a harmful or dependent manner. 60% of those with ADHD were using GHB often in conjunction with Crystal Meth. 50% of those identified in this study were using ketamine.

47% of patients commenced on atomoxetine reported side-effects and 33% of patients commenced on atomoxetine stopped due to side-effects or a lack of perceived benefit.

Depression was the most common co-morbidity in those diagnosed with ADHD seen in 20% of this cohort. Other co-morbidities include: anxiety disorder, borderline personality disorder, bipolar affective disorder and interestingly gaming disorder.
**Conclusion:** This series reflects the strong association between ADHD and addiction particularly within the Club Drug Clinic population. Implications include routine screening for ADHD in