treatment option for patients diagnosed with schizophrenia (SCZ) with comorbid SUD.
Objectives: Therefore, the main goal of the present work was to summarize literature data about DRD3 and CAR in SUDs.
Methods: A systematic review was conducted in August 2024. The full-text search was performed without filtering from four databases (PubMed, ScienceDirect, Web of Science, Cochrane Registry). In the first search "dopamine receptor D3" AND "substance use" OR "addiction" OR "dependence" OR "misuse" were used as the key search terms, and in the second search "cariprazine" AND "substance use" OR "addiction" OR "dependence" OR "misuse" were used. Duplicated studies, non-relevant articles, review articles, and animal and cell studies were excluded.
Results: In the first search, 40 articles were identified; however, 15 were excluded. In the second search, 21 articles were identified; however, 12 were excluded. Findings based on the 25 included articles show that DRD3 modulators, which are mostly agonists of the receptors, may have a positive effect on both psychotic symptoms and substance use frequency- and drug-seeking behavioral reduction. Our findings based 9 included articles demonstrate that CAR is a more effective and safe medication for SCZ with comorbid SUD than other atypical antipsychotics. It could also be suggested that in other psychiatric conditions where substance abuse is occurring CAR is also a good treatment option.
Conclusions: Based on past and current research, it's crucial to systematically evaluate the role of DRD3 for developing new therapeutic perspectives in SUDs, though more research is needed to confirm the efficacy and safety of DRD3 modulators and CAR as medications for SUDs. Furthermore, the present review suggests that CAR may be the optimal antipsychotic for treating SCZ with comorbid SUDs.

Disclosure of Interest: None Declared

EPV0069

Peer victimisation and drug use in sexual minorities

R. S. C. Lee[1]* and A. Curley[1]

[1]Melbourne School of Psychological Sciences, The University of Melbourne, Melbourne, Australia
*Corresponding author.
doi: 10.1192/j.eurpsy.2025.966

Introduction: Adversity in adolescence, including peer victimisation, is associated with substance misuse in young adults, particularly in vulnerable individuals like sexual minorities. However, the potential developmental mechanisms underlying this association are yet to be fully understood.
Objectives: This study will empirically investigate the relationship between childhood adversity and addictive behaviours in young adulthood (i.e., drug use). In particular, we will examine the possible moderating role of sexual identity and orientation on drug use problems.
Methods: A total of 329 adults (aged 18 to 35 years old) were recruited into the study and included in the final analysis. Of the 329 participants, 93 identified as being a sexual minority (26.16%). A large majority of participants were women (N = 278 / 78.1%) with a mean age of 20.3 years old (SD = 3.5) and a diverse distribution of ethnicities reflective of metropolitan Australia. All participants completed an online battery of demographic, self-report, and behavioural measures. A multiple regression using Hayes' PROCESS macro for SPSS was conducted.
Results: Overall, both identifying as being a sexual minority (b = .51, p < . 05) and reporting greater peer victimisation during childhood (b = .17, p < . 01) predicted greater levels of drug use in adulthood. Over and above the independent effects of sexual orientation and peer victimisation, being a sexual minority who also experienced a high level of peer victimisation were together predictive of more pronounced drug use in adulthood (b = .25, p < . 05).
Conclusions: Identifying as being a sexual minority as well as reporting greater peer victimisation in childhood were independently predictive of potential risky drug use in adulthood. This is in keeping with theories of the role of chronic stress in the development of potentially harmful behavioural, coping mechanisms. Consistent with our hypothesis, these effects were magnified when they occurred in combination, such that sexual minorities were more susceptible to the effects of peer victimisation on later drug use. Findings from the current study contribute to the identification of a possible modifiable adolescent risk factors – that is, peer victimisation - in driving increased substance misuse in sexual minority groups, which have significant implications for targeted public health strategies for these vulnerable individuals.

Disclosure of Interest: None Declared

EPV0071

Pentazocine dependence in a 57-year-old female patient

G. P. Leonte[1]*, R. M. Rusu-Andron[1], H. G. Coman[1] and M. M. Manea[1]

[1]Psihiatrie, Spitalul Clinic Județean de Urgență, Cluj Napoca, Romania
*Corresponding author.
doi: 10.1192/j.eurpsy.2025.967

Introduction: Pentazocine dependence, although rare, poses serious risks in patients with chronic pain, especially after surgical interventions. Misuse of prescribed opioid analgesics, such as Pentazocine, can lead to a wide range of medical and psychiatric complications. This case study explores the long-term effects of Pentazocine dependence in a patient with coexisting psychiatric conditions and chronic medical illnesses.
Objectives: MAM, a 57-yer-old female patient, was first introduced to Pantozocine following pancreatic surgery in 1999 for Wirsung duct calcifications, a hereditary condition. Initially prescribed for pain relief, the patient increased her dose to 14-20 vials/day over six months. Psychiatric issues, including suicidal ideation and financial distress, emerged shortly after her addiction took hold.
Methods: Between 2002 and 2024, the patient was admitted to psychiatric wards approximately 55 times. In 2003, after an accidental burn injury to her lower limbs, she began injecting Pentazocine directly into the wounds, as intramuscular administration no longer produced the desired effects. Her conditionworsened with multiple suicide attempts, including an overdose of 22 vials of Pentazocine, which she survived. During her hospitalizations, she presented with complications such as insulin dependent diabetes mellitus, mixed tissue disease, cervical spondylosis, and Raynaud's syndrome. Multiple reconstructive surgeries were performed for the wounds caused by repeated injections.

Results: Meanwhile, the patient followed methadone substitution treatment until 2008, later and until now she only requiring antidepressant treatment for recurrent depressive disorder, her current diagnosis.
Conclusions: This case highlights the significant risks associated long-term opioid dependence, particularly in patients with medical conditions and psychiatric comorbities. Managing Pentazocine dependence requires careful monitoring of pain medication, early psychiatric intervention, and long-term follow-up. Comprehensive care, including psychological support and substitution therapies, is essential for improving prognosis in such cases.

Disclosure of Interest: None Declared

EPV0072

Neuropsychiatric and Hematologic Manifestations in Nitrous Oxide Psychosis: A Case Report and Scoping Review

S. Liaqat[1]*, F. Rizwan Bhatti[2] and A. Deka[1]

[1]Psychiatry, RUSH University Medical Center, Chicago, United States and [2]Psychiatry, Pakistan Institute of Medical Sciences, Islamabad, Pakistan
*Corresponding author.
doi: 10.1192/j.eurpsy.2025.968

Introduction: Nitrous Oxide (N2O) has recently emerged as a global public health threat, particularly in young adults resulting in neuropsychiatric and hematologic sequelae.
Objectives: This study aims to highlight a case of N2O-induced psychosis with a review of literature on neuropsychiatric and hematologic complications with N2O use in patients presenting with psychosis, with elucidation of mechanisms, clinical presentations and management.
Methods: Case was reviewed, and findings were contextualized with existing literature. Relevant keywords yielded 253 studies; after title and abstract screening, 14 studies were reviewed.
Results: A 33-year old male with no known comorbidities presented with bizarre behaviors with paranoia, persecutory delusions, delusion of control, ideas of reference, Cotard delusion, and hallucinations. He reported taking daily B12 supplements because he was aware of the effects of N2O on B12 metabolism. Collateral information revealed N2O use for >5 years with recent escalation. Labs revealed high homocysteine (93.45 µmol/L), despite normal B12 and MMA level. Syphilis was negative. Neurological examination showed intact proprioception, vibration and gait, and a negative Romberg sign. MRI indicated nonspecific FLAIR hyperintensities. He was admitted to the inpatient psychiatric unit where he initially remained disorganized, paranoid, and attempting to elope, requiring PRN medications. Risperidone was uptitrated to 0.5 mg QAM and 1 mg QHS, while continuing B12 supplementation. On discharge, psychosis had resolved. He was provided psychoeducation regarding the complications of N2O use, he demonstrated understanding, however, remained in pre-contemplation stage.
Literature review (Fig 1) highlights significant neuropsychiatric and hematological effects. B12 deficiency resulting in sensorimotor polyneuropathy and axonal degeneration, with MRI often showing symmetrical cervical spinal cord abnormalities has been reported in multiple studies. EMG tests reveal peripheral nerve damage. Hematologically, it is linked to cerebral venous sinus thrombosis and DVT, with elevated homocysteine raising thrombosis risk (Fig 2). Psychiatrically, nitrous oxide can cause transient psychosis and suicidal behavior, although cases of subsequent primary psychotic illness have been reported. Management includes cessation of use, B12 supplementation; occasional use of antipsychotics has also been reported.

Image:

Studies	Age/Sex	Presenting Symptoms	Vitamin B12 Level	Homocysteine Level	Methylmalonic Acid Level	CT/MRI Findings	EMG Findings	Treatment/Management
Sood et al, 2022	25/M	Acute psychosis, lower-extremity sensorimotor proprioceptive ataxia	Low	Not reported	Not reported	MR: Normal	Length-dependent sensorimotor polyneuropathy with predominant motor component and axonal degeneration	B12 Supplementation, neurological rehabilitation.
Raaj et al, 2024	22/M	Auditory hallucinations, delusions, personality changes	Normal	Not repoted	Not reported	CT Brain: Normal	Not reported	Olanzapine 20 mg
Sethi et al, 2006	20/F	Paranoia, auditory hallucinations, delusions, gait disturbance	Low (202 pg/mL)	High	High	Not specified	Not reported	IM B12 Supplementation; Quetiapine 25 mg
Matsuda et al, 2023	19/M	Fever, impaired consciousness, hallucinations, thought broadcasting	Not reported	Not reported	Not reported	Not specified	Not reported	Risperidone 1 mg daily
Er et al, 2023	27/M 21/F	Altered mental status, hallucinations, and unilateral right lower limb swelling Headache, vomiting, diplopia	Low Low	Not reported High	Not reported	MRI spine: subacute combined degeneration of spinal cord CT Brain: suggestive of CSVT	Not reported	Rivaroxaban and vitamin B12 Rivaroxaban
Garakani et al., 2014	22/M	Psychosis, paranoia, auditory hallucinations	Low (144 pg/mL)	High	High	CT Brain: Normal	Not reported	IM B12; Risperidone 1 mg QHS
Kim et al., 2019	22/F	Auditory hallucinations, delusions	Low (126 pg/mL)	High	High	Not reported	Normal	IV B12 Supplementation
Wu et al., 2022	19/M 25/F 28/M 18/F 22/F 17/F	Limb numbness, gait instability	Low Low Low Low Low normal* Low	High Normal High Normal Normal High	Not reported	No abnormalities MRI: High symmetric signals MRI: High symmetric signals MRI: High symmetric signals MRI: High symmetric signals MRI: High symmetric signals	peripheral nerve damage peripheral nerve damage peripheral nerve damage peripheral nerve damage, decreased muscle strength peripheral nerve damage Not reported	B12 Supplementation
Roberts et al., 2020	24/M	Numbness in hands and feet, difficulty walking, personality changes	Low normal	High	High	MRI: T2 hyperintensity in cervical spinal cord	Not reported	B12 Supplementation, Physical rehab
Blair et al., 2019	20/F 30/M 30/M 21/M 23/F 23/F 28/M	Paraesthesia, gait ataxia, psychiatric symptoms	Low Low Low Normal Normal High Normal	High High High High High High High	Not reported	MRI: Inverted V sign MRI: Inverted V sign Normal MRI: Inverted V sign MRI: Inverted V sign MRI: Inverted V sign MRI: Inverted V sign	Not reported	None None None B12 Supplementation B12 Supplementation B12 Supplementation B12 Supplementation
Chien et al., 2020	32/F 33/M 24/F 32/M 21/F 24/F 27/M	Sedation, irritability, suicide attempt Irritability, suicide attempt Irritability, Psychosis, suicide attempt Auditory and visual hallucinations, derealization Irritability, auditory hallucinations, persecutory delusions, violent behaviors Irritability, auditory hallucinations, persecutory delusions, violent behaviors, self-harm behavior Irritability, violent behaviors, self-harm behavior	Not reported	Not reported	Not reported	Not reported	Not reported	Benzodiazepine Risperidone 2mg + Benzodiazepines Haldol 5 mg daily + Benzodiazepines Sulpiride 50 mg daily + Benzodiazepines Benzodiazepines Quetiapine 400 mg daily + Benzodiazepines Haldol 5 mg daily + Quetiapine 200 mg daily
Mohammed et al., 2024	25/F	Bizarre behavior, delusions, hallucinations	Low (135 pmol/L)	High	High	Normal	Not reported	IM B12 Supplementation, Risperidone 4 mg, Diazepam 30 mg daily
Lundin et al., 2019	21/M	Double vision, lower extremity weakness with difficulty ambulating, psychiatric symptoms	Low (78 pg/mL)	High	High	Normal	Not reported	IM B12 Supplementation, Physical therapy
Mancke et al., 2016	35/M	Numbness, difficulty walking, psychiatric symptoms (depression, anxiety)	Low (110 pmol/L)	High	High	MRI: T2 hyperintensity in posterior columns of cervical spinal cord	Not reported	IM B12 Supplementation, Physical therapy, Methionine supplementation

Image 2: