



# Entomophagy and coprophagy in alcohol use disorder: a rare psychopathology

## Abstract

Behavioural presentations can vary in psychiatric disorders. Entomophagy, i.e. insect eating and coprophagy, i.e. eating of faeces are not only socially inept but also uncommon. These are also considered a variant of pica. The variations in psychopathology, especially the uncommon presentations are worth exploring. Here, we discussed a case with presentation of entomophagia and coprophagia along with alcohol dependence. Possible aetiological hypotheses were considered like pica, oral fixation, thiamine deficiency, and role of amygdala. This case report highlights the need to pursue and explore the aetiological reasons, so as to improve management strategies.

**Keywords:** Abnormal eating behaviours. Substance use. Psychology.

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**Received:** 4 September 2020

**Revised:** 7 May 2021

**Accepted:** 14 May 2021

**Epub:** 25 February 2023

**DOI:** 10.5958/2394-2061.2022.00002.7

## INTRODUCTION

Behavioural presentation with its wide variety has always been of interest to those working in the field of mental health. Coprophagy, i.e. eating of faeces, reported as a bizarre and abnormal behaviour, is noticed mainly in patients with neurological disorders, organic brain disorders, dementia, schizophrenia, mental retardation, autism spectrum disorders, even as compulsive behaviours, and paraphilias.[1] Alongside, entomophagy which refers to insect eating, though culturally accepted in certain tribal areas is again seen as an odd human behaviour. Till now, these abnormal eating behaviours have been reported in isolated couple of case reports to our knowledge and is further interesting to note them in association with substance abuse. Here, we are reporting a unique presentation of entomophagy with coprophagy with alcohol dependence.

## CASE SUMMARY

Thirty-one-year old married male, formal education of high school, and working as a semi-skilled labourer of urban background was brought by family members to outpatient department of psychiatry of Pt. BD Sharma Post Graduate Institute of Medical Sciences (PGIMS), Rohtak, Haryana, India for complains of suspiciousness, disturbed biological functions, and odd behaviours in the form of insect eating for last three months. On detailed exploration, alcohol dependence with continuous use for last three years was present. Three months back, he started doubting his wife over infidelity without adequate basis and this would lead

to frequent argument with the spouse. Gradually, family members noticed that he started remaining irritable, and questioning each and every act of family members like expenditures, whereabouts, etc. He stopped eating food at home or would ask family members to eat first before him saying that they have mixed something in the food and want to harm him. Symptom severity increased further and he started remaining withdrawn and aloof, would wander away from home in nearby parks, picking up garbage, and even eating it. Some oddities in behaviour were noticed where he would kill ants and housefly, and consume them orally. He was also seen eating other non-edible substances like soap, wood, sewage material, and even his own faeces. He started showing disinhibited behaviour by taking off all his clothes even in front of his children. During this period, he was regularly consuming alcohol, about 500 ml of Indian made foreign liquor. Higher cognitive functions were normal. No history suggestive of depressive or manic symptoms was present. No history of any head injury, blackouts, forgetfulness, confusion, disorientation, seizure was present. No significant past, personal, or family history of any psychiatric illness was available. No history of any significant medical or surgical illness was found.

General physical examination was within normal limits. On mental state examination (MSE), he was self-absorbed, muttering to self, inappropriately smiling, and in disheveled state. He was disinterested in the interview and had increased psychomotor activity with irritable affect. Delusion of persecution and infidelity was established over serial MSE. Blood tests like complete haemogram, liver function tests,

serum electrolytes, and renal function test were within normal range. Non-contrast computed tomography (NCCT) head and x-ray chest was normal.

Provisional diagnosis of mental and behavioural disorders due to alcohol dependence with psychotic disorder, schizophrenia-like was kept with a possible differential diagnosis of schizophrenia. During ward stay, patient was disruptive and was harming family members. He was prescribed tablet quetiapine 400 mg, tablet lorazepam 8 mg in divided doses, and tablet thiamine 300 mg per day orally. Patient remained alcohol abstinent during ward stay and there was gradual reduction in psychotic symptoms. Brief intervention was started for him for alcohol dependence and patient maintained on regular follow-up for about six months after discharge. Quetiapine and lorazepam were gradually reduced over follow-up. Slowly, follow-ups were irregular and discontinued treatment. Anti-craving agent was not introduced due to risk of psychosis as well as due to affordability issues with naltrexone and acamprostate.

After about three years of last follow-up, patient was brought again with delusion of infidelity, persecution, disorganised behaviour, increased alcohol intake, and poor medication compliance. Treatment with antipsychotics was initiated and he responded to treatment. Psychotic symptoms were relieved and non-pharmacological intervention for substance dependence was done. Patient followed up for about 12 weeks and maintained well. Alcohol-induced psychosis was considered keeping in view the onset of symptoms with increase in alcohol intake along with reversibility and maintenance with abstinence. There was no psychotic symptoms observed in the period of alcohol abstinence.

## DISCUSSION

Alcohol-induced psychosis is a common entity with psychopathology hovering around persecution and infidelity. The above case has a very rare presentation of coprophagy in conjunction with entomophagy, both of which are reported only once together to the best of our knowledge in a case report by Lingewaran *et al.*[2] These eating behaviours are considered to be a variant of pica,[1,3] and coprophagy can even confer damage by causing poor oral hygiene, chronic gingival infection, and chronic lesions on the mucosa and sialadenitis.[4] Insect eating is culturally accepted and has been reported to have some protein rich elements. Still, it is considered to be a taboo in society; one of which was where our patient resides.[5] Not only there were diagnostic difficulties, one establishing a temporal association with alcohol, second because of its odd presentation which is usually not seen in any substance-induced psychotic disorder. There were management challenges too in this patient because of poor insight, acceptability, and compliance to treatment, inadequate social support and irregular follow-up. As with pica, the aetiology of coprophagia is neither well-understood nor well-researched within the adult or paediatric population.[6] A study done in eighties had hypothesised possible role of thiamine deficiency and total lesions of the amygdala in those with coprophagia. But, this was done primarily on animals and for humans, coprophagia

was seen in those without thiamine deficiency or amygdalar lesion.[7] Similarly, another case report where coprophagia was one of the presenting symptom and was considered as an escalation of client's paraphilic fetishes, and resolution in the symptoms were noticed with alcohol abstinence, supportive psychotherapy, and tricyclic antidepressants.[8] Also, psychoanalytic exploration could have also helped in further understanding underlying unconscious conflicts as alcohol drinking and even pica[9] has been linked to pathological oral fixation in psychosexual stages. All these possible aetiological hypotheses in line with alcohol warrants further exploration so as to provide better pathophysiological comprehension.

## Conclusion

Coprophagia and entomophagia, variants of pica are rare entity together and seen mainly in those with neurological deficits or in those with severe mental illness. The underlying mechanism is still not known and individual case evidences can help build in literature so as to provide a comprehensive overview of this rare phenomenon.

## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his/her consent for his/her images and other clinical information to be reported in the journal. The patient understands that his/her name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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Jangid P, Goyal A, Bhushan A, Sethi S. Entomophagy and coprophagy in alcohol use disorder: a rare psychopathology. *Open J Psychiatry Allied Sci.* 2022;13:26-7. doi: 10.5958/2394-2061.2022.00002.7. Epub 2021 May 20.

Source of support: Nil. Declaration of interest: None.