

**Case report****Title: Opioid use disorder in a 5-year-old child: A case report from Western Rajasthan**

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**Abstract**

Opioid use disorder is very common in adolescents and adults, but is rarely reported in preschool and school going children. We hereby describe a 5-year-old boy, with history of opioid use who presented with insomnia, irritability, abdominal cramps, body aches, yawning, and running nose, and was later successfully managed by a multimodal approach.

**Keywords:** Opioid use disorder, Child, Rajasthan**Introduction**

Doda or Poppy Straw is the husk left after the opium is extracted from the pods of the poppy plant (*Papaver somniferum*). It is used traditionally as an auspicious offering in weddings, after death (as offering to the guest), and as a home remedy for treating diarrhea, cough, fever, teething babies or as a general tonic for well-being by parents inadvertently in rural Rajasthan [1-3]. This inappropriate use can lead to drug overdose, intoxication, and addiction, especially in children by their parents and guardian [3]. Here, we present a case of Opioid use disorder in a five-year-old child and its management.

### **Case history**

Master X, a 5-year-old male child, belonging to rural Western Rajasthan, living in a joint family, presented to us with the complaints of decreased sleep, decreased appetite, irritability, abdominal cramps, body aches, yawning, and running nose. On further inquiry, the history of opioid consumption in the form of Doda was elicited from his grandfather for the last 3.5 years. At the age of 1.5 years, his grandfather started giving him a pinch (1 $\mu$ g) of Doda occasionally. But later, he was being given almost daily for general well being, to increase his appetite and sleep, as it was a popular remedy being commonly used in rural Rajasthan. With opioid intake, his sleep and appetite improved, which encouraged further use. His grandfather was regularly consuming Doda (2 kg per month) in a dependent pattern for the last 20 years. So, whenever he consumed Doda, he would also serve his grandson the same. Gradually, the dose of Doda intake was also increased on demand of the child himself or whenever he was not able to sleep properly with the given dose. After consuming Doda, the child felt energetic and reported improvement in his physical complaints. So, he came regularly at a given the time of day to procure it. On presentation, he was taking 2-3 pinch of Doda per day in two divided doses daily, and the last intake was two days prior to presentation. Because of this, his interaction with children of same age decreased. He was not interested in playing outdoor games and was not able to complete the given household task. He also became irritable on trivial things, and his academic performance deteriorated. His parents brought him primarily for the treatment of the above-mentioned withdrawal symptoms and also wanted him to quit Doda. He had similar withdrawal symptoms, whenever dose was missed even for a day, but no abstinence and treatment-seeking attempt was made earlier. No history of any other psychiatric illness, behavioral problems and substance use was elicited on clinical interview and examination, although any specific screening tool was not

used. No history of fever, vomiting, abnormal jerky movements, trauma, injury, or chronic medical illness was elicited. In his family, only the grandfather had a history of opioid dependence. No history of any other psychiatric illness was elicited. Birth history revealed a full-term normal vaginal delivery with a birth weight of 3 kg and milestones achieved at an appropriate age. Physical examination revealed no abnormalities. Routine laboratory investigations were within normal limits, and no abnormality was detected on ultrasound of the abdomen. At the time of presentation, his score on the Clinical Opiate Withdrawal Scale (COWS) was 15, which suggested moderate withdrawal.

After a detailed evaluation, history, and mental state examination, he was diagnosed as Opioid use disorder as per the Diagnostic and Statistical Manual of Mental Disorders, 5<sup>th</sup> Edition (DSM-5). After a discussion about the diagnosis and its management with his parents and grandfather, he was started on tablet Clonidine at a dose of 25 mcg (1/4<sup>th</sup> part of 0.1 mg tablet) thrice a day, on an outdoor basis with the advice of regular vital monitoring and follow-up. The dose and frequency of Tablet Clonidine was gradually tapered at the rate of 25 mcg over a week and stopped completely in the next three weeks. For the initial one week, tablet Clonazepam 0.25 mg was given for sleep restoration. Tablet Paracetamol was given to control pain and syrup Cyproheptadine to increase his appetite. Non-pharmacological management in the form of supportive therapy and motivational enhancement therapy (MET) was started simultaneously. Later, relapse prevention sessions were held in which the child was taught broadly about the lapse, relapse, various reasons/situations of relapses such as pressure from grandfather or other people, craving, physical complaints, poor health, etc. and effective handling of this situation by assertiveness, urge management, lifestyle management (diet, exercise, yoga, participation in outdoor games). A separate psychoeducation session was held with his parents and grandfather,

who were explained about their respective roles. His grandfather was also motivated to quit his opium and was started on treatment for the same. The child regularly came for follow up sessions for the next six months, was asymptomatic without any medication and also reported improvement in his scholastic performance.

## **Discussion**

This case is unique in many aspects. First and foremost, opioid use disorder in this age group is rarely reported although a few cases of opioid intoxications and neonatal abstinence syndrome have been reported in the literature [1-5]. Secondly, this case also highlights the role of family and culture in starting as well as propagating opioid consumption. In India, various folk medicines, such as ghasa, balkadu, etc., have been suspected to contain opium [3] and administration of these has been a practice for years together. Many reasons are cited by elders for administering such as a remedy for diarrhea, indigestion, irritability, constipation, and as a build-up tonic, [3] as seen in the present case. According to a study done by Ashrafioun et al, opioid-abusing parents were associated with greater global impairment of their children [6]. In a systemic review, Romanowicz et al found that children of parents with opioid use disorders showed greater disorganized attachment. The children also had an increased risk of emotional and behavioral issues, poor academic performance, and poor social skills. Younger children had increased risk of abuse or neglect, or both, that later in life may lead to such difficulties as unemployment, legal issues, and substance abuse [7]. Similarly, in the present case, the child became opioid dependent, showed emotional disturbances, impairment of his concentration, and overall functioning in various domains of performance. This child was managed with Clonidine (to control moderate pain and other withdrawal symptoms), Clonazepam (for sleep) during detoxification along with various non-pharmacological approaches to maintain abstinence and to

promote mental health well-being. Here we want to highlight some challenges which were faced while conducting MET in a small child. First, he was not very well aware of his opium addiction, its short and long-term health hazards, and the benefits of quitting. Second, the perceived health benefits of consuming opium by the patient and grandfather. Third, there were difficulties in the application of motivation enhancement approach, so it was tried in a different way. For instance, he was told that if he quits opioid use, there will be greater chances of success in his studies. He was given the temptation of rewards such as extra play or his favorite food being served.

Opioid agonist such as methadone, buprenorphine, and tramadol are commonly used for opioid detoxification. Tramadol is a weaker opioid agonist and offers certain major advantages such as easy and wide availability and low abuse liability, but it is contraindicated in children less than 12 years of age. Clonidine is a nonnarcotic analgesic, also been reported to be an effective pharmacologic agent for the treatment of opioid withdrawal [8]. In literature, it was also used in the treatment of neonatal abstinence syndrome in doses between 0.5 and 1 mcg/kg every four to six hours [8]. In treating opioid addiction, moving from an individual approach to a family-focused approach can have lasting benefits for children and parents, and decrease health care costs. So, treatment and counseling of the other family members who consume opioids or stay with the patient were very important. The child's grandfather was also given treatment to quit opioids, which included family therapy. Role of family in relapse prevention of children is very crucial, as they can effectively identify and acknowledge high-risk situations, guide the child in better coping, help in stimulus control, urge management, promoting healthy lifestyle and development of positive addiction. They also form the biggest support to increase the self-efficacy of their child.

To conclude, this is a unique case, as opioid use disorder is rarely reported in this age group. This case also highlights the role of family, society, and culture in the causation and family-focused approach in the management of such cases. Awareness and education programs are required to cover the masses, especially in western Rajasthan, where opioids are used traditionally.

**Conflict of interest:** None declared

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