

## Snake Venom Abuse in Rave Parties : a case report

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### ABSTRACT

*Snake venom abuse has been reported in literature from India. We present herewith two cases of snake venom abuse and discuss the phenomenology that revolves around it. The factors leading to snake venom abuse and its probable psychopathology is discussed.*

**Key words:** *Snake venom abuse, rave parties.*

### INTRODUCTION

The abuse of snake venom as way to get a “high” among thrill-seeking addicts is on the rise in metro cities of India. Direct snake bite and snake venom pill are being used in rave parties to get the high. Of all the novel forms of psychoactive substance use reported, snake venom represents the potentially most lethal form. Only 4 cases have so far been reported in our country, though the practice is said to be far more common in India [1]. Cobra venom has been allegedly used for centuries in traditional Indian and Chinese Medicine, with an reference to serpents in English medicine in 1702 and in Hindu medicine use of snake venom for de-addiction [2]. We here present two patients who reported having taken snake bite in rave parties.

### CASE REPORT

#### Case 1

A 22 year old, Hindi speaking, Muslim male educated up to the 8<sup>th</sup> standard residing in Mumbai, working as a ward boy in a private hospital was brought by his father with chief complaints of brown sugar consumption. He had started chasing brown sugar and

increased from 2 sachets a day to 4-5 Sachets a day. He also used to abuse Codeine containing cough syrup at a rate of 1 bottle /day. Since a year, the patient started using snake bites to get a high. He mentioned that the snakes were green coloured and were kept in a bottle. A sharp tap with blunt instrument was given on snake head, on tapping snake used to bite on the sites like the the tongue or toes. He would experiment with snake bites after chasing brown sugar. The patient used to fall asleep for 18-20 hours after the bite initially which later gradually reduced to 10-12 hours. He had a feeling of dizziness, blurred vision followed by heightened arousal and a sense of well-being. No withdrawal features were seen. Initially, he used to take bite once in 2 months, and since the last 4 months he increased the same upto 2 times per week. The bites were priced at Rs 2500/- per bite.

## Case 2

A 22 year old Muslim male sweeper educated up to the 10<sup>th</sup> standard was brought by his brother with a history of brown sugar chasing since the past 4 years with a daily consumption 2-3 Sachets/day. His last consumption was 5 days prior to admission. He attended a rave party in Mumbai Suburbs where he was administered a snake bite after chasing brown sugar on the tongue as everyone in the party was doing so. The snake was kept in a box with a hole on its top. The person had to keep tongue on the hole then snake would bite the tongue. After the bite he would have drowsiness and he would sleep for 12-14 hours. He had attended similar parties after that and would regular enjoy the effects of a snake bite.

## DISCUSSION

Our patients were young adults who were enthusiastic to experience something new after trying the regular substances of abuse. Since the snakes were readily available at raves they started experimenting with snake bites and found it be fascinating and providing freedom from reality. It's noteworthy that both patients got admitted for opioid dependence and they didn't think that snake bite was a problem as it had no withdrawal features. Both patients were lost to follow up subsequently.

Snake venom is a complex mixture of proteins, enzymes, and various other substances. The proteins are responsible for the toxic and lethal effects of the venom and its functions are to immobilize the prey. The enzymes play an important role in the digestion of the prey and various other substances are responsible for important but non-lethal biological effects [3]. The absence of any local tissue injury apart from the bite mark, the wide distribution and easy availability of elapids especially with snake charmers in India and the symptoms experienced by most abusers, all point to a neurotoxic nature of envenomation. In a previous case report similar cases have been reported. They hypothesised that the neurotoxic effects of the elapid envenomation results mainly from two types of toxins viz. neurotoxins and dendrotoxins. Of the neurotoxins, the  $\alpha$ -neurotoxins competitively bind to the postsynaptic neuronal and skeletal muscular nicotinic cholinergic receptors (nAChRs), leading to muscular paralysis [3-5]. Some of the neurotoxins result in a centrally mediated opiate-independent analgesia through the acetylcholine receptors and can substitute morphine and mitigate opioid withdrawal. As already known, these receptors mediate the rewarding or euphoric experiences associated with substance abuse via the mesolimbic dopaminergic system [5-6]. It has been hypothesised that snake venom liberates pharmacologically active

substances in the body such as 5-hydroxytryptamine, Bradykinin, slow-reacting substances, prostaglandins and Lysophosphatides [7-8]. It has also been mentioned that drowsiness is one of the cardinal symptoms of elapid snake bite, particularly cobra snake bite. It is a commonly recorded symptom even in early Australian and Indian snake bite literature [7].

There are some reptile conservationists who claim that this is just a hype created among the drug addicts. After a common cobra or krait bite that paralyse the entire involuntary function of the body the person or animal is bound to die of breathlessness. After the Russell's Viper and saw scalded Viper bite, haemostatic venom is released which attacks the voluntary functions. They claim semi aquatic snakes like checkered / keel back snakes are used at such rave parties which bite at any slightest irritation or ill treatment. It has been claimed that there is no rush or kick after such bite. By definition, venom is a toxic substance that is injected .So if venom is ingested it will lead to digestion of the proteins in the venom. It will lead to toxicity only if there are ulcers in the digestive tract. So if the patients were getting high after taking this snake venom through the snake bite it can be either a different snake, details of which are not known or there can be some other substances released during snake bite or it can be a mere psychological effect of getting bitten by something as dangerous as snake [8].

Also, both of our cases and also past reported cases were using some other substances with snake bite so it is difficult to interpret the effect was of the snake bite or the substances or combined effect. Also there is possibility of these substances being adulterated and that may be leading to some unusual effects. There is possibility of adulteration in the venom pills with sedatives that may be enhancing the effects of alcohol. Thus there are a large number of questions unanswered regarding this snake venom abuse which is being promoted in raves and this area needs to be explored further.

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