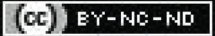


Ingestion of Unknown Snake Venom: A Case Report

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ABSTRACT

Venom from a snake is extremely uncommonly consumed by humans. It can be administered in a variety of ways, including a direct bite on the tongue or other parts of the body, or it can be taken as a venom pill at rave parties. The belief is that upon consumption, it provides virility, a sense of elation, and excitement, among other effects. However, it is more often dangerous to the human body and can even be fatal. Only a very small number of cases have been described in publications. In the present case report, a 36-year-old male patient who was an alcoholic and had a history of psychiatric disease initially arrived with anxiety as a result of having consumed snake venom the day before. As for the patient's vital signs, they were acceptable. For observation, the patient was admitted to the intensive care unit reserved for medicine. However, antivenom was not administered. After 24 hours, he was released from the hospital. This is an unusual case where the patient was relatively unharmed after the consumption and didn't show any obvious lasting effects on the neurological or haematological systems. If the venom is not effectively broken down in the intestines and is absorbed as such, drinking snake venom can have deadly repercussions. The treatment is determined by the features that the patient presents. In the present case, antivenom was not administered, as the need was not justified. However, there may arise situations in other cases where it should be administered sparingly.

Keywords: Addiction, Alcohol, Rave parties, Snake Bite, Substance use disorder

CASE REPORT

A 36-year-old male, with a known case of psychiatric illness, presented to the hospital with anxiety. There was a history of ingestion of unknown snake venom (source unknown) mixed with an alcoholic drink a day prior at home under the influence of alcohol. The patient had a history of attention deficit disorder and antisocial personality disorder diagnosed in the year 2018. He had been a chronic alcoholic for 10 years with the last consumption on the night of the incident. He had been on antipsychotic medication in the form of tab Olanzapine and tab Risperidone in the past, which he had stopped taking 1.5 years back on his own. Upon examination, the patient was conscious and oriented. His Blood Pressure (BP) was 130/90 mmHg, RR 18/min, and Saturation of peripheral oxygen (SpO₂) was 98% on room air. There were no signs suggestive of envenomation like dysarthria, diplopia, ptosis, bleeding from multiple sites, shock, muscle pain, arrhythmia, etc. Systemic examination revealed no abnormality. Routine blood investigations like Complete Blood Count (CBC), Liver Function Test (LFTs), Kidney Function Test (KFTs) were done, which were within normal limits. His whole blood clotting time, coagulation profile, and creatinine phosphokinase were also normal.

The intravenous line was secured, and normal saline was started at a maintenance rate. He received Inj. Thiamine and Inj. Ondansetron i.v. in the Emergency Department. The patient didn't show signs of envenomation; hence, antivenom was not started. He was admitted to the Medicine Intensive Care Unit to look for any signs of delayed complications and envenomation. Inj. Thiamine 100 mg and multivitamins were administered. During his course of stay over one day, psychiatric consultation was taken, and he was started on tab Lorazepam 2 mg Si Opus Sit (SOS) and tab Olanzapine 10 mg HS OD. The patient showed no signs of delayed complications and was discharged in stable condition on vitamin B complex and the above mentioned antipsychotic medications. He was asked to follow-up after one week, following which he was oriented to time, place, and person. The patient was regular with his given treatment. He was further counselled about

substance use disorder and its adverse effects and was advised regular psychiatric counselling, i.e., motivational enhancement therapy, which he attended during his follow-up.

DISCUSSION

Snake venom consists of a complex mixture of various proteins, enzymes, and other substances. These enzymes are responsible for the lethal and toxic effects that immobilise the prey. Enzymes can also aid in digesting the prey. Consumption of snake venom can have devastating effects if the venom is absorbed directly through intestinal ulcers in the mucosa, if present [1,2]. Similarly, it can directly affect the nicotinic and muscarinic receptors [1]. Consumers are reported to experience a high either through ingestion or deliberate biting by a snake. There have been reported cases in which patients have used snakebites on the tongue or toes directly, or ingested snake venom in the form of tablets (at rave parties) mixed with alcohol [1,2]. Talwar D et al., reported a case of a 28-year-old snake charmer with a 15-year alcohol addiction who initially used snakebites to reduce his alcohol dependence and later orally consumed snake venom mixed with an alcoholic beverage. Snake venom has been used as a recreational drug by drug addicts or patients with psychiatric disorders [1].

Ram D reported a case of a 19-year-old with a higher socio-economic status and nearly a 6-year history of substance abuse who used to take snakebites on his tongue, leading to feelings of happiness, a joyful mood, and reduced need for sleep. This report mentions a unique event where he injected an unknown substance into the snake to enhance the effect of the snake venom [3]. A young man who was repeatedly envenomated by an alleged 'Indian Cobra' experienced a 'high', according to Shukla L et al., [4]. However, upon direct identification, it was revealed to be a harmless 'Rat snake'. They attribute the documented psychological consequences to high expectations of pleasant experiences, strong suggestions, personality factors, and most significantly, the danger of purposefully incurring snakebites [4]. According to Mehra A et al., a 33-year-old alcoholic mentioned that his friends used snake venom to get high and as a substitute for

opiates. He also tried it as a cheaper opioid and alcohol substitute out of curiosity. He initially had a cobra bite on his tongue with the help of itinerant snake charmers. The patient reported jerky body movements, blurred vision, and unresponsiveness, or a "blackout" for one hour after the snakebite. Upon waking up, he experienced heightened alertness and well-being for 3-4 weeks, which he described as stronger than any alcohol or opiate high. During these 3-4 weeks, he did not crave alcohol or painkillers and did not use them. He continued smoking. However, after 3-4 weeks, he became irritated, sluggish, and drug-crazy. Subsequently, he bit another snake, and the same cycle repeated for another 3-4 weeks. Following this pattern, he began seeking a snake bite every 3-4 weeks to experience the high [5]. While there are several documented cases of intentional snake bites, ingestion of venom is rare. Interestingly, one account mentions snake wine, where a snake was kept in a wine bottle for a period before the wine was consumed [6]. Individuals appear to consume snake venom for recreational purposes or in anticipation of increasing sexual desire. This practice is not limited to individuals of lower socio-economic status or education levels. Even highly educated individuals and members of higher socio-economic classes, such as software engineers, can fall victim to this addiction, as snake venom is available in various forms and distributed at parties [1,2]. Snake venom addiction often occurs in conjunction with alcohol or other drug abuse, as well as in patients with psychiatric disorders. Most cases of snake venom addiction involve a snake bite to the tongue or toe. There is only one reported case, similar to the present patient, where the venom was ingested. The effects of ingesting snake venom depend on the type of venom. Cobra venom ingestion can cause neuroparalytic symptoms such as diplopia, dysarthria, ptosis, dysphagia, etc. Russell's viper venom can lead to haemorrhagic manifestations, coagulopathy, acute kidney injury, and shock. Sea snake venom can damage muscle cells, leading to compartment syndrome, cardiac arrhythmias, rhabdomyolysis, etc. [7]. If signs of envenomation manifest during treatment, the standard protocol for treating snake envenomation with antisnake

venom and other supportive measures must be followed. Since the present patient did not exhibit any signs or symptoms of envenomation, antisnake venom was not administered. He was discharged after 24 hours and received counselling on the use of antipsychotics and further treatment.

CONCLUSION(S)

Cases of snake venom addiction are rarely seen in hospitals. Generally, ingested snake venom will be broken down by gastrointestinal enzymes, and there should not be any signs and symptoms. However, if the venom is not properly digested and is absorbed as is, the effects will be similar to those seen in snake bites, depending on the type of snake venom. The management of these patients in the Emergency Department would be guided by the signs and symptoms present upon presentation. Antisnake venom and supportive treatment would be considered for such patients. Even if signs of envenomation are not evident initially, the patient should be monitored for any delayed complications. Successful outcomes can be achieved by implementing a multidisciplinary approach.

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