ANIL AGGRAWAL'S
Internet Journal of
Forensic Medicine and Toxicology
The world's first online journal devoted entirely to forensic medicine and toxicology · Published 1 January and 1 July

VOL. 4, NO. 2
Downloaded from www.anilaggrawal.com · ISSN 0972-8074 (Online) · https://www.anilaggrawal.com/ij/vol_004_no_002/others/pg001.html

Homicide With Snakes: A Distinct Possibility And Its Medicolegal Ramifications

CITE THIS ARTICLE
Aggrawal Anil. Homicide With Snakes: A Distinct Possibility And Its Medicolegal Ramifications. *Anil Aggrawal's Internet Journal of Forensic Medicine and Toxicology, 2003*; Vol. 4, No. 2 (July-Dec 2003): ; Published July 17, 2003,

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: **EMBASE Accession Number: 2004204913**

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Introduction

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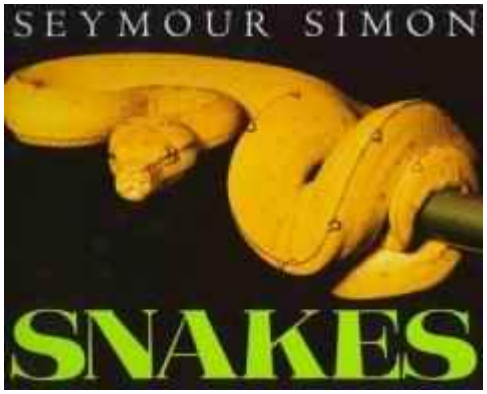

As specialists in forensic medicine, all of us routinely study and teach snake poisonings to our students. Undoubtedly almost all cases of snake poisoning are accidental in nature, and as forensic

medicine experts we concentrate ourselves mainly with being able to differentiate a poisonous snake from a non-poisonous snake. The author, in his experience, has more than once been contacted by personnel in the casualty department, where a victim has been bitten by a snake, the villagers accompanying him, having brought the dead snake along with them, whom they have been able to kill after the bite. Here the main question before the medical officer is to distinguish between a poisonous and a non-poisonous snake. If a medical officer can correctly distinguish between the two, he can confidently assure the patient, some 95% of the snake bites being non-poisonous in nature. Even if the snake which bit the patient was poisonous, it helps to know, which snake actually bit the patient, because in that case, a monovalent antisnake venom can be administered, which is more effective (than polyvalent snake venom, which is injected if the snake is unknown).

Masquerading a murder as accidental bite with a snake

...a clever murderer can simulate the fang marks artificially to lull the doctor into thinking that the person was actually bitten by a snake, while in fact the case may be that of homicide with some other poison. This is specially done with a vegetable poison Abrus precatorius (known in vernacular as ratti, gunchi or Indian liquorice)...

It is this author's opinion (who has had a considerable experience in the casualty department), that one of the best ways a poisonous snake can be differentiated from a non-poisonous one is a careful study of the bite mark. History is also important, because many a time, a genuine murder may be masqueraded as a snake bite case. In fact, a clever murderer can simulate the fang marks artificially to lull the doctor into thinking that the person was actually bitten by a snake, while in fact the case may be that of homicide with some other poison. This is specially done with a vegetable poison *Abrus precatorius* (known in vernacular as *ratti, gunchi* or *Indian liquorice*)[1]. The seed is crushed and mixed with powdered glass, opium, *datura*, onion and a little quantity of alcohol, making it into a paste. Sharp spikes (called *suis*) are then fashioned out of this paste and dried in the sun. Each spike or *sui* typically weights about 90 to 120 mg and is about 1.5 cm in length - about the length of one's thumbnail. Two sharp spikes are then mounted on a wooden handle, care being taken that the distance between them is roughly the same as that between the two poisonous fangs of a viper. The wooden handle is then struck forcefully on the animal's buttocks. The needles find their way deep in the animal's flesh, from where the active ingredients slowly ooze out into the system, and the animal dies over a period of 3-4 days. The advantage of using this method, is that the injection marks of these *suis* look quite like viper bite (the necrosis around the marks is quite similar to that), and the owner of the cattle believes that his cattle were unfortunately bitten by the viper. Any chance of counter-revenge is thus averted. As mentioned above, a clever killer may so arrange the distance between the two suis on a handle, as to completely mimic the distance between the two fangs of a viper!"

Such *suis* have also been used to kill human beings. The killer may hold one or two such *suis* in his palm between his closely held fingers (the way one holds a cigarette; only much more tightly). The victim is then slapped in such a way that the *suis* penetrate the flesh. The effect is similar to giving an injection of abrin to the victim, and is thus obviously quite effective. In all such cases, a proper post-mortem would enable the pathologist to dissect out the *suis*, making cause of death clear.

Killing Cattle with snake venom

...a snake is enclosed in an earthen pot in which a banana has been put already. The snake is then agitated. The snake in anger, bites the banana again and again, thus filling its meshes with its deadly poison. After sometime, the banana is taken out, smeared on to a dirty rag, and this rag is then introduced in the rectum of the cattle of a rival. The cattle dies soon...
One usual way in which cattle are being killed is this: a snake is enclosed in an earthen pot in which a banana has been put already. The snake is then agitated. The snake in anger, bites the banana again and again, thus filling its meshes with its deadly poison. After sometime, the banana is taken out, smeared on to a dirty rag, and this rag is then introduced in the rectum of the cattle of a rival. The cattle dies soon, thus the person takes revenge.

This is a usual way of cattle poisoning in our country (India). Thus snake poisoning has two distinct medico legal aspects: accidental and cattle poisoning.

Suicide and Homicide with Snakes

In the literature and history of the last two thousand years, one can several instances of suicidal and homicidal poisoning with snake. After going through all the available literature, it is the considered opinion of this author that homicidal poisoning with snakes is a distinct possibility and must be kept in mind whenever dealing with suspicious deaths.

Suicide

...History bears testimony that the Egyptian queen Cleopatra (69-30 B.C.) committed suicide (on August 30) with the help of a snake (an asp), which she made to bite in her left breast...
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Homicide

As far as homicide with snake bite is concerned, it was a usual practice in our country as well as in several other countries to execute the capital punishment, by throwing the victim in a pit full of snakes. Another way was to ask the victim to put his hand inside a small basket harboring a deadly snake. These were undoubtedly cases of homicidal snake bite, although such a homicide had the state stamp over it, as they were legally executed sentences.

Another legendary instance of homicidal snake bite is of the *Vish Kanyas*, or "poison damsels", who were much used to kill a state enemy in ancient India especially in the period of Mauryan and Gupt Empires. The Great Tactician Chanakya writes at length about these *Vish Kanyas,* who were sent to cohabit with an enemy king, who would die the next day. There has been much intellectual debate over the actual mechanism by which these "poison damsels" killed. However the author has found references, where it is mentioned that these *Vish Kanyas* were repeatedly being bitten by a snake since their childhood. The result was that their blood (including the saliva) was loaded with almost fatal quantities of this poison. The *Vish Kanyas* themselves were not affected by these fatal doses as they gradually developed immunity against these poisons. When such a woman went to cohabit with the rival king, she would kiss him, and at the same time, bite his tongue, so that the poison could be absorbed from her saliva directly in his system. We all know that snake poison is a protein which gets denatured upon entering the stomach, so it would be useless to administer it simply through mouth. It was imperative for her to bite the rival king's tongue, so the poison could be

absorbed directly in the system. This is one way in which a snake could be "indirectly" used for homicide.

...Sir Arthur Conan Doyle in his "The Adventure of the Speckled Band" provides us with a very interesting case of homicide with snakes. In this story, Dr. Grimesby Roylott, kills one of his step daughters Julia Stoner, with a snake (swamp adder). Two years later he tries the trick on the other step daughter, Helen (twin of Julia), but is accidentally bitten by the snake himself. Holmes and Watson find him dead in his room, with the snake coiling his head like a speckled band...

However "direct" or actual cases of homicide may not be entirely unknown. Sir Arthur Conan Doyle, in his story *The Adventure of the Speckled Band*, tells us how Dr. Grimesby Roylott, kills one of his step daughters Julia Stoner, with a snake (swamp adder). Two years later he tries the trick on the other step daughter, Helen (twin of Julia), but is accidentally bitten by the snake himself. Holmes and Watson find him dead in his room, with the snake coiling his head like a speckled band.

Sherlock Holmes who went to investigate the case at the instance of Helen, cries at one place, "It is a swamp adder! The deadliest snake in India.." Holmes goes so far as to give us even the possible autopsy findings in such a case. He also tells us that only a very shrewd Coroner would be able to detect such a homicide. Rightly he exclaims at another place, "The idea of using a form of poison which could not possibly be discovered by any chemical test was just such a one as would occur to a clever and ruthless man who had had an Eastern training." At yet another place - much important for forensic pathologists - he says, "It would be a sharp-eyed coroner indeed who could distinguish the two little dark punctures which would show where the poison fangs had done their work." Thankfully enough, Holmes is able to catch the snake, before it can do the intended harm to Dr. Roylott's second victim, Miss Helen Stoner. Dr. Roylott himself is bitten instead.

Modi[2] describes a case in which a man threw cobra venom on the open wound of his enemy trying to kill him. Another case is described in the same book, in which a person tried to commit suicide by injecting dried snake venom in a small wound in his body.

...King Boris of Bulgaria who was allied to Hitler during World War II, was killed by his queen with snake venom, because she wanted Bulgaria out of Axis alignment...

Charles Bailey tells us of an interesting case of homicide with snakes[3], [4]. During World War II, King Boris of Bulgaria was allied to Germany. When events went against Germany, King Boris was suddenly stricken with a serious illness. Hitler flew the finest physicians in Germany to assist the king. Despite German doctors being best in the profession, they were unable to save King Boris, and he died. When the German physicians flew back to Berlin, Hitler was waiting and had them released from their oath of confidentiality to their late patient, and he demanded to know what killed the king. The doctors told him that it was some form of snake venom that duplicated the symptoms of a heart attack.

King Boris was married to an Italian princess. Hitler blamed her for poisoning the king. The Queen wanted to take Bulgaria out of the Axis alignment before the end. King Boris intended staying loyal to Berlin, and that was his undoing.

Jonathan Tze (Chief Researcher, Pickwick, Inc.) quotes Renate Rolle's *The World of the Scythians* (University of California Press, 1990, page 65) to tell us of a curious practice undertaken by the Scythians[5]. At a certain time of year, the Scythians killed a certain kind of snake (probably small

adders) and left their bodies in a vessel to decompose. They then filled the vessel with human blood, which they sealed and buried in dung until the blood began to putrefy. The snake poison presumably retained its potency in the decomposed bodies of the adders, the blood was an excellent breeding ground for bacteria, and the dung contained tetanus and gangrene germs.

This cocktail of poisons (a blend of snake venom and tetanus/gangrene rich bacterial mass) was then applied to a sharp object (i.e. an arrow), which was then used to kill enemies. The arrow caused death within an hour (in most cases immediately). If the victim survived, gangrene would set in after a day and possibly also suppuration of the wound. After an incubation period of one or two days, or perhaps not until a week later, tetanus would set in and kill the victims, who survived the initial onslaught.

The author has reason to believe that in tribal areas of several parts of the world, many homicidal (and suicidal) cases with snake bite (or snake venom) may still be going unnoticed. If we have some idea of suicidal and homicidal aspects of snake bite, we would be better able to distinguish such cases in our actual practice. Although this discussion would be useful to all the doctors working in the casualty and Emergency Departments, it may be of special benefit to those forensic and other medical personnel who are working in tribal and village areas.

Additional information

1. The question is often asked, what would happen if one ingested the snake venom? Would he die? The answer is "no". Snake venom is a mixture of proteins which would be digested in the stomach. It is also suggested that snake venom is not absorbed from the gastric mucus membrane[2]. However if a person is suffering from gastric ulcer, some snake venom may be absorbed through this ulcer and may pose danger to the person ingesting snake venom.

   ...What would happen if a person killed an animal, say a goat, by causing a snake to bite it, and then serving his enemy with its meat...

   This possibility may be kept in mind in cases where a clever poisoner tries to feed a poisonous banana to his victim after impregnating it with snake venom with the method described above.

2. What would happen if a person ate meat prepared from the body of an animal killed with snake venom? Would he die? The answer is again "no". The reason is the same as mentioned above. This may be one of the clever methods by which a person may try to kill his enemy. He is most likely to fail though.

3. One of the legends associated with these *Vish Kanyas* is that they had teeth in their vagina (a condition still known as Vagina dentata), by which they could "bite the penis off". Another much more plausible theory is that these girls were actually suffering from deadly venereal diseases, and the enemy king would be infected with these diseases by cohabiting with these girls. Even today, i.e. in the 21st century, the possibility of contracting the deadly AIDS by infected girls is very much possible, and in fact there are cases on record where such girls have been tried for homicide.

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