

SNAKE BITE: RURAL POINT OF VIEW OF TACKLING THIS EMERGENCY¹*Saili Umesh Jadhav and ²Rishi Raj Ashokkumar Sinha^{1,2,3}rd Year MBBS Student P.D.V.V.P.F.'s Medical College, Ahmednagar, Maharashtra.

*Corresponding Author: Saili Umesh Jadhav

³rd Year MBBS Student P.D.V.V.P.F.'s Medical College, Ahmednagar, Maharashtra.

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ABSTRACT

Snake bite is a common medical emergency and an occupational hazard, more so in tropical India, where farming is a major source of employment.^[1] The aim of this study was to assess the knowledge of villagers living in Vadgaongupta regarding the first aid treatment to be given to a patient of snake bite. Method used was interview technique in which only consenting adults of 439 families were interviewed and the obtained data was then analysed. 86.3% of patients of snake bite were found to be adults, out of whom 70% were farmers by profession. 81% of the study population said that they used home methods like applyin tourniquet, cutting and suction, keeping the affected in a dark room etc. Various people practiced feeding the patient various food substances like milk, alcohol, etc. 29% of the study population choose the option of mantriks and voodoo practices to treat snake bite cases. This is the area of work which needs to be filled in. It can only happen with increasing the various awareness programmes and group activities educating the villagers of Vadgaon gupta regarding anti snake venom. The villagers should also be encouraged to approach the hospital instead of practicing voodoo.

KEYWORDS: Vadgaongupta, programmes, mantriks and voodoo practices.**INTRODUCTION**

Snakes are fascinating and form an important component of fauna and are the objectives of awe and curiosity since the dawn of civilization. In India 236 species of snake have been identified out of which only 52 are poisonous.

Russell's viper (*Daboia russelii siamensis*) bite is an occupational hazard of our farmers and carries a mortality rate of about 10% according to a study conducted by WHO.



RUSSELL VIPER SNAKE.
(PICTURE CREDIT TO: fogler&gurmen)

Snake bite is a common medical emergency and an occupational hazard, more so in tropical India, where farming is a major source of employment.^[1]

India has remained notorious for its venomous snakes and the effect of their bites. Every year, 50,000 Indians die in 2,50,000 incidents of snake bites, despite the fact that India is not home for the largest number of venomous snakes in the world, nor is there a shortage of anti- snake venom in the country.^[2]

The available data on the epidemiology of snake bite from the Indian Subcontinent are sparse because most of the snake bites occur in illiterate, rural people who use witchcraft and traditional healers.^[3]

Joseph Fayrer of the Indian Medical Service first quantified human snakebite deaths in 1869 for about half of "British India" (including modern Pakistan, Bangladesh and Burma), finding that 11,416 people had died of snakebites.^[4]

First aid is the provision of initial care for an illness or injury. It is usually performed by non-expert, but trained personnel to a sick or injured person until definitive medical treatment can be accessed. Certain self-limiting illnesses or minor injuries may not require further medical care past the first aid intervention. It generally consists of a series of simple and in some cases, potentially life-saving techniques that an individual can

be trained to perform with minimal equipment.^[9]

AIM

The aim of this study was,

- To assess the knowledge of villagers living in Vadgaongupta regarding the first aid treatment to be given to a patient of snake bite.
- To find out the various voodoo practices in that village.

MATERIAL AND METHODS

Out of 1503 households, a proportionate sample was selected and one representative from each household was further selected at random. A Bilingual Pretested questionnaire was used for data collection. It consisted of two parts pertaining to awareness, practices, and was collected on the spot.

The study was conducted with consent from the head of the families.

Sample size

With random selection method 500 households were selected for our study. Forty of those families declined to give answers to the questionnaire, 21 families houses were found to be closed. Therefore, 439 families were questioned with their permission. Only adults were involved in this study. Therefore out of 439 families, 928 questionnaires were filled out.

Study variables

Study variables such as age, sex, occupation, education, types of snakes, symptoms of snake bite were studied and data was analyzed to see extent of knowledge and its association with various socio economic parameters percentage and proportion test.

Place of study

The place of study Vadgaongupta is a large village located in Nagar of Ahmednagar district, Maharashtra with total 1503 families residing.

The Vadgaongupta village has population of 7192 of which 3757 are males while 3435 are females as per Population Census 2011.

Time of study

Study conducted on:	23 th JULY- 24 th JULY'2016.
Time for analysis:	24 th JULY- 29 th JULY'2016.

Inclusion and exclusion criteria

Subjects who were not present at the time of study in the village were excluded.

Only adults were questioned using the questionnaire with their consent.

RESULTS

Age and sex and occupation of individuals who suffered from snake bite are mentioned in table no.1.

Table number 1.

PARAMETERS:	VALUES:
Age	
1. children	13.7%
2. adults	86.3%
Sex	
1. males	54%
2. females	46%
Occupation	
1. farmers	70%
2. others (business men, Workers, etc.)	30%

81% of the people were using some home methods which are mentioned in table no.2.

Table number 2.

Methods followed.	Percentage
1. Applying tourniquet	25%
2. Cut and Suction	34%
3. Food	
a. giving extra food	83%
b. total restriction of food	17%
4. Kept in dark room	46%
5. Applying medicinal herbs like tulsi, neem etc.	47%

The extra foods given were mostly given in combination, the various food items are mentioned in table no.3.

Table number 3.

FOOD ITEMS	PERCENTAGE.
1. MILK	43%
2. GHEE	37%
3. ONION	31%
4. GARLIC	7%
5. FRUITS	2%
6. GIVING ALCOHOL	OR 4%

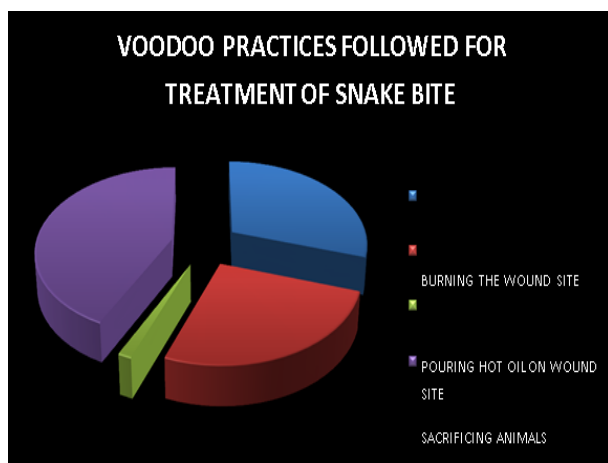
CAFFENATED BEVERAGES

29% of the surveyed population used mantriks or voodoo methods to cure snake bite patients, many of them tried several of these methods.

Majority of these cases ended up in death.

Few were saved as they later returned to hospital for treatment.

Some of the methods used during voodoo are mentioned in graph number 1.



Graph number 1.

47% of the people interviewed have the history of death due to snake bite in their family in last 5-10 years.

Only 49% of the people were opting for immediate transfer of the patient to hospital for snake bites while 51% were not.

While waiting for medical help (ambulatory service), only 13% of the total population surveyed used correct methods like,

- ✓ Move the person beyond striking distance of the snake.
- ✓ Have the person lie down with wound below the heart.
- ✓ Keep the person calm and at rest, remaining as still as possible to keep venom from spreading.
- ✓ Cover the wound with loose, sterile bandage.
- ✓ Remove any jewelry from the area that was bitten.
- ✓ Remove shoes if the leg or foot was bitten.
- ✓ Tying a tourniquet if the hospital is in a distance of 30km.

DISCUSSION

The awareness about first aid measures was less in majority of the subjects. Use of mantriks and voodoo was practiced in few cases. In most of the cases the nearest health facility was in a reachable distance, taking not more than 30 minutes to reach and transport facility is available to reach nearest health centre. According to this study, in order to prevent untimely death, there is a need to provide knowledge regarding first aid treatment of snake bite to the villagers.^[5] This need is felt by the investigators of the present study as well.

Moreover, even hospital deaths may be missed or not reported as official government returns vary in their reliability, as shown from a study of snakebites in Sri Lanka.^[5] Therefore empowering the villagers about first aid treatment in emergencies like snake bit becomes a necessity to save the patient's life.

As found in an earlier study^[6], the peak age group of snakebite deaths is 15–29 years (25% or 142/562).

Similarly in our study the peak age group of subjects suffering from snake bite were found to be adults. This is due to the fact that adult subjects whose occupation is farming are more prone to exposure in to environments in which snakes reside or habitat.

Practicable solutions include strengthening surveillance to allow a more accurate perception of the magnitude of the problem, improving community education to reduce the incidence of snakebites and speed up the transfer of bitten patients to medical care, improving the training of medical staff at all levels of the health service (including implementation of the new WHO guidelines.^[7]).

Our data suggest similar values compared to recent global estimates of mortality from snakebite deaths^[8]; the upper bounds of recent annual estimates were 94,000 deaths globally and 15,000 deaths in India.

In a study to see the tourniquet effectiveness to reduce the severity of envenoming after snake bite in Brazil clinical and laboratory data from patients who applied a tourniquet and who did not apply it after being bitten did not show any difference.^[9] The tourniquet has to be applied by a professional so as to tie it with proper methods.

In Brazil in 1983-84, 730 cases of snake bite were seen six hours after the bite and received antivenom. There were no case of death.^[10] This shows the effectiveness of ASV. Knowledge regarding Anti Snake Venom was seen lagging amongst 81% of the affected population. This gap is to be filled with various awareness programmes and group activities educating the villagers of Vadgaon gupta.

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