

Descriptive Study on Treatment of Poisonous Bites Followed by Traditional Medical Practitioners in Vilavancode Taluk, Kanyakumari District

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ABSTRACT

Siddha system of medicine is a unique system of medicine which has been flourished with a wide range of treatment methods and provides definite cure to a vast number of diseases. Traditional medicine has been an integral source of health in communities for centuries. They also provide treatment to wide range of toxins ranging from plant biotoxins to animal biotoxins such as the bites of rats, dogs, spider, scorpion, monkeys, snakes, cats, centipede etc. In this aspect Poisonous bites are treated by many traditional practitioners in Vilavancode Taluk from which I had chosen four of them for this descriptive study. They were using both internal and external medicines. This study helps to bring out the treatment procedure used for the Poisonous bites by traditional medical practitioners.

Keywords: Traditional medical practitioners, Poisonous bites, Vilavancode Taluk, Kanyakumari district.

INTRODUCTION

Venomous animal bites cause considerable rate of morbidity and mortality. Those caused by reptiles as such snakes could be

the commonest. It was estimated that at least 4,21,000 envenomations and 1,25,000 deaths occur worldwide from snake bite annually. India reported highest snake bite envenomation and death rate. Neurological complications vary according to the offending animal and are often directly related to toxic effects of the venom affecting the Central Nervous System, Cardiovascular system or the coagulation cascade. Bites may often infect with bacteria from the mouth of the biting creature. Certain animals, insects and arthropods can inject venom through mouth parts or a stinger. These venoms range in toxicity from mild to life threatening. Creatures known for their stinging bites includes Bees, wasps, centipedes, Millipedes, Lizards, Insects, scorpions etc. In Siddha system both bite and sting can be described by using the same word "KADI". Poisonous creatures that are known for bite and stinging includes,

1. SNAKE

Over a hundred million years or ago, Snakes have adapted to nearly every climate from the wettest jungle to the driest desert and the boiling heat of the equator to the arctic circle. Of the terrestrial venomous snakes,

five species are widespread on the Indian mainland. These include Cobra, King Cobra, Common krait, Russel's viper, and saw scaled Viper. These paramount species are responsible for the majority of the mortality and injury cases in the country.

TYPES OF SNAKE VENOM:

1. Proteolytic venom

Proteolytic venom consists of proteolytic enzymes that causes degradation of tissue structures. The venom breaks down vessel walls along with muscle tissue accelerating the death of the prey. Large amounts of proteolytic venoms are found in rattle snakes and vipers.

2. Hemotoxic venom

Hemotoxic venom destroys the red blood cells in the body of an afflicted person while also impacting tissues and organs. The venom breaks down cells and tissue around the injection site, leading to tremendous pain. This venom can also cause blood clotting or even prevent blood clotting. The results of this venom in humans include Cardiovascular failure, loss of an affected limb and massive internal bleeding.

3. Neurotoxic venom

It acts on the nervous system causing muscle paralysis, damage to the brain, and loss of consciousness. This sort of venom hinders the nerve impulses around parts of the body acting very quickly.

4. Cytotoxic venom

Cytotoxic venom kills cells. This type of venom is often found in cobras and other elapids. This venom is known to severely damage skin and underlying tissues, often leading to disabilities in the victim.

Fang marks:

All venomous snakes deliver the venom through a pair of specialized teeth called fangs. The fangs are connected to the venom producing glands by narrow tubes through which the venom reaches them. There are two types of fangs. They are
Groove fangs: These fangs have a groove through which the venom runs.

Hollow fangs: The hollow fangs are like a hypodermic needle through which the venom flows.

Types of toxic enzymes found in snake poisons:

There are approximately 20 types of toxic enzymes found in snake poisons throughout the world known to man. Most snakes employ between six to twelve of these enzymes in their venom. Some aid in the digestive process, while others specialize in paralyzing the prey. List of various toxins that have been identified in snake venom are Proteolytic enzymes Phosphomonoesterase, Arginine ester hydrolase, Phosphodiesterase, Thrombin-like enzyme, Acetylcholinesterase, Collagenase, RNase, Hyaluronidase, DNase, Phospholipase A2 (A),5'-Nucleotidase, Phospholipase, BL-Amino acid oxidase, Phospholipase C, Lactate dehydrogenase, Adenosine tri phosphatase.

Scorpion:

There are more than 1500 recognized species of scorpions widely distributed all over the world. While all scorpions are venomous to their natural prey, only a few species are potentially lethal to humans.

Scorpion sting envenoming is dominated by muscle weakness associated with arterial hypertension, Cardiac arrhythmia, Myocarditis etc. These manifestations occur as the result of release of Catecholamines into the blood stream or due to direct cardiac toxicity of the venom. Intracranial haemorrhages occur in the setting of acute increase in arterial blood pressure related to sympathetic over stimulation.

Spider:

There are more than 40, 000 species of spiders. Only a few are really dangerous to humans. Three main syndromes result from spider bite envenoming: Latrodectism, loxoscelism, and funnel web spider envenoming. Latrodectism is related to neurotoxins present in the venom. Most cases present with headache, lethargy, irritability, tremor, Fasciculation or ataxia. Loxocelism may present with a stroke due

to severe coagulopathy. The venom of funnel web spiders also has neurotoxins that stimulate neurotransmitter release resulting in sensory disturbance and muscle paralysis.

Bees and Wasps:

Bee and wasp stings are common and painful. In most cases, they are not severe and cause only localized swelling, discoloration, and discomfort. However, some people can have life threatening reactions. A bee sting usually causes a sharp pain and a puncture wound or laceration in the skin. The venom in a bee or wasp sting induces local toxic reaction at the site of the attack. A typical local reaction to a bee or wasp sting produces the following symptoms. Instant pain at the site of the sting that is sharp, burning, and usually lasts a few seconds, a swollen, discolored mark that can be itchy, burning, and painful, swollen hives that peak about 48 hours after the sting and last for up to 1 week.

Siddha system of medicine is a unique system of medicine which has been flourished with a wide range of treatment methods and provides definite cure to a vast number of diseases. According to WHO around 80% of the world's population is estimated to use traditional medicine such as herbal medicines, yoga, indigenous therapies and others. Traditional Medicine has been an integral source for health in communities for centuries. In the Siddha system had provided us with the knowledge in the field of toxicology as such how the toxins affect the human body ie, both physiological and psychological effects. Also provided the treatment and cure to a wide range of toxins ranging from plant biotoxins to animal biotoxins such as the bites of rats, dogs, spider, scorpion, monkeys, snakes, cats, centipede etc. This study helps to bring out the treatment procedure used for the poisonous bites by traditional medical practitioners.

MATERIALS AND METHODS

OBJECTIVES:

PRIMARY:

To study the treatment methods followed by traditional medical practitioners for poisonous bites in Vilavancode Taluk, Kanyakumari district, Tamil Nadu.

SECONDARY:

To list out the diagnostic method of poisonous bites followed by traditional medical practitioners.

STUDY PERIOD:

Four months.

STUDY DESIGN:

Cross sectional study.

STUDY AREA:

1. Keralapuram in Kanyakumari District
2. Padanthalumoodu in Kanyakumari District
3. Arumanai in Kanyakumari District
4. Alamparai near Pechiparai in Kanyakumari District

INFORMATION COLLECTED:

The information will be collected from traditional medical practitioners.

DATA COLLECTION PROCEDURE:

Datas are collected by depth interview in face-to-face manner.

DATA COLLECTION:

Traditional medicine practitioners treat human mental and physical sickness by herbs, medicinal plants and other techniques traditionally used in the community and believed to cure and heal by assisting or stimulating nature, and advise on methods to preserve or improve health and wellbeing. In this aspect Poisonous bites are treated by many traditional practitioners in Vilavancode Taluk, Kanyakumari Dist, Tamil Nadu from which I have chosen four of them for Qualitative descriptive study.

TABLE -1 INTERNAL MEDICINES

Poison bite	Type of medicine	Ingredients	Dosage indication
Snake bite	Decoction	Thirikadugu, Thiripala, Thirijathi, Amukkuraver, Vasambu, Seerakam, Karunjeerakam, Kattuseerakam, Porikaaram, KasthuriManjal, Kadugurogini, Athimathuram, Kothumalli, Santhanam, Rakhthasanthanam, Devadaaru, Chittarathai, Lavangapattai, Kottam, Adhathodai, Azhinjil, Ayilpattai, Neeli avuri ver, Naagathaali ver, Karunkurinjiver, Nerunjilmul ver, Vilvamver, Veppampattai, Seruppadaai, Kodivelikizhangu, Manathakkali, Sivanarvembu samoolam, Sangankuppi ver, Karudakodi ver, Sivathai ver, Vel erukku.	30-60 ml, twice daily for 10 days .
Snakebite, Skink bite	Decoction	Nanjaruppan, Karudakodi ver, Thippili, Kirambu, Milagu	30-60 ml, twice daily for 10 days.
Beetle bite	Paste	Veliparuthi leaf juice, Salt, Chukku	
Cat bite	Paste	Achyranthes aspera, Vengayam, Coconut milk	Nellikai alavu (15 mg)
Centipede bite	Decoction	Thumbai leaves, Shivanarvembu Samoolam, Siriyanangai ver	30 to60 ml twice daily for 3 days.
Rat bite	Decoction	Chukku, Milagu, Veppampattai, Amukkura ver, Karudakodi ver, Neeli avuri	30 to60 ml twice daily for 12 days
Dog bite.	Juice	Kutti thakkali, Neeli avuri Pazhaya kanji sadham	3 oz, thrice daily for 3 days.
Spiderbite, Scorpion bite, Centipede bite.	Decoction	Karudakodi, Neeli avuri Karunjeerakam, Thetti ver, Peipudal Kadugurogini, Kottam, Santhanam Vettiver, Maramanjil	30 to 60 ml thrice daily for 9 days.
Rat bite, Scorpion bite, Centipede bite.	Powder	Nayuruvi seed -1 veesai	4g, twice daily for 25 days
Snake bite.	Paste	Aamanakku leaves, Thippili	induces vomiting and detoxifies.
Dog bite.	Decoction	Keeripoondu leaves.	30 to 60 ml tds for 9 days
Dog bite.	Paste	Kollankovai kizhangu	10 gm, ods for 3 days
Mild poisonous bites	Juice	Thumbai leaves	One table spoon (16 ml)
All poisonous bites.	Juice	Arugampul leaves	10 ml
All poisonous bites.	Juice	Pei thagarai leaves	10 ml
All poisonous bites.	Juice	Neeli avuri leaves	10 ml
All poisonous bites.	Juice	Eechura mooli leaves	10 ml
All poisonous bites.	Juice	Nilavembu leaves	10 ml
All poisonous bites.	Powder	Manjal powder, Sittiramutti ver powder Vendhaya powder, Nilavembu Manjitti ver powder.	4g, bds in empty stomach
Cobra bite.	Paste	Tender leaves of Naaval, Milagu, betel leaf juice.	3 Panavedai
Vomiting in case of dog bite	Decoction	Chukku, Milagu, Vasambu, Murungai eerku	30 to60 ml thrice daily.
Rat bite.	Chooranam	Thippili, Santhanam	4g, twice daily for 1 week.
Snake bite.	Maathirai	Gowri padaanam, Vellai padaanam Kumattikkai	Arisi alavu
For mild poisonous bites.	Decoction	Siriyanangai ver	30 to60 ml thrice daily.
Locked jaw in case of Scorpion bite.	Paste	Copra thengai	For chewing
Spider bite.	Decoction	Kuppaimeni ver	30 to 60 ml thrice daily.
Skimg bite.	Decoction	Saaranai ver	30 to 60 ml thrice daily.
Snake bite.	Karkam	Erukku leaves	Nellikai alavum (15gm).
Scorpion bite, Cat bite.	Decoction	Neeli avuri, Thulasi, Siriyanangai Karudakodi, Kottam, Devadaaru Thippili moolam	30 to 60 ml thrice daily.
For all poisonous bites.	Paste	Avuri leaves, Milagu, Chukku	Nellikai alavu (15 gm)
For chronic poisonous bite.	Paste	Vellerukkan ver, Siriyanangai ver, Vellai	Twice daily for 3 days.

		Kakkanam ver	
Snake bite.	Paste	Veshanarayani kizhangu add sufficient amount of water.	Nellikai alavu (15 gm), twice daily for 3 days.
Snake bite.	Paste	Karudakodi kizhangu, add sufficient amount of water.	Nellikai alavu (15 gm), twice daily for 3 days
Snake bite.	Paste	Sarpagantha kizhangu, add sufficient amount of water .	Nellikai alavu (15 gm) twice daily for 3 days.
Monkey bite, Cat bite	Paste	Murungai pattai, Murungai ilai kozhundhu	Nellikai alavu (15 gm) twice daily
Snake bite, Sking bite, Rat bite, Vippuruthi sannai, 18 types of Kuttam.	Mai (Mahaparanjothi Mai)	Azhingil vidhai, Magizh vidhai, Kuntrimani vidhai, Perungayam, Gowri padanam, Arithaaram, Pon mezhugu, Gandhagam, Nervaalamvidhai, Navachaaram, Thirikadugu Vengayam, Manosilai, Lingam, Nabhi, Rasam	Panavedai (488mg), for 5 or 7 or 10 days based on the severity of the disease.
For all poisonous bites	Kuzhambu (Mahaparanjothi Kuzhambu)	Oomathai vidhai, Azhingil vidhai, Magizh vidhai, Kuntrimani vidhai, Nervaalam vidhai, Manosilai, Arithaaram, Gowri padanam, Vellai padanam, Navachaaram, Seenakaaram, Thurisu, Rasam, Gandhagam, Vengaram, Nabhi, Pon mezhugu, Perungayam, Thirikadugu, Vellulli, Vendhayam.	Panavedai (488mg)

Table – 2 EXTERNAL MEDICINES

Poison bite	Type of medicine	Ingredients	Dosage indication
Bees and wasp sting.	Poochu	Gowri padanam, Ganthakam, Gingely oil	
Cat bite	Poochu	Kuppaimeni leaves, Salt	
Centipede bite	Poochu	Puli, Salt	
Dog bite.	Poochu	Paruthi ilai, Kuppaimeni leaves, Neeli avuri leaves, Karudakodi ilai	
Dog bite.	Poochu	Nayuruviver, Lemon seeds, Oomathai leaves	
Snake bite.	Nasiyam	Thaivelai samoolam, Thumbaisamoolam, Periya vengayam	One drop in both nostrils.
Snake bite.	Ottadam	Heat an earthen pot and heat a pepper leaf in it and apply it in the body	Chillness in palms and soles .
Snake bite.	Thappalam	Milagu, Fresh Manjal, Vasambu	Head ache or Heaviness of head
Dog bite .	Poochu	Vengayam, Soda uppu	
Spider bite .	Poochu	Adhathodai leaves, Fresh Manjal, Milagu	
Cat bite .	Poochu	FreshManjal, Sunnambu	
Rat bite .	Poochu	Kuppaimeni leaves	
Snake bite.	Thappalam	Pachaiarisipowder, Karunkozhi blood	Applied over uchi (bregma)
Scorpion bite.	Poochu	Vidather	
Scorpion bite.	Poochu	Thelkoduksu samoolam	
Spider bite .	Poochu	Kuppaimeni, Fresh manjal	
Sking bite	Poochu	Peithagarai ilai	Blackish discoloration in case of sking bite.
Centipede bite.	Poochu	Neem leaves, Onion, Fresh manjal	
For poisonous bites.	Anjanam (Sudukaadu Meetaan Kuligai)	Thelkoduksu ilai, Nabi kizhangu, Rasam, Perungayam, Kottam, Nervaalam vidhai, Azhinjil vidhai, Etti vidhai	Payiralavu. Applied on the eyelids of both the eyes.
Snake bite.	Thappalam	Veshanarayani kizhangu	Applied over uchi (bregma)
Snake bite.	Thappalam	Karudakodi kizhangu	Applied over uchi (bregma)
Snake bite.	Thappalam	Sarpagantha kizhangu	Applied over uchi (bregma)
Swelling present in case of poisonous bite	Poochu	Sodakku poo ilai, Nagamalli ilai, Veshanarayani kizhangu	
Monkey bite, Cat bite.	Poochu	Murungai pattai, Murungai ilai kurundhu.	
For all poisonous bites.	Ennai	Angucapati, Tulsi leaves, Nagamalli ilai, Veshanarayani kizhangu	Skin rashes in case of poisonous bite.
Beetle bite.	Poochu	Pappaya leaves	
Beetle bite.	Beetle bite.	Kuppaimeni leaves	If swelling is present in case of beetle bite

Distribution of Internal medicines and External medicines

Medicine	Percentage
Internal	59%
External	41%

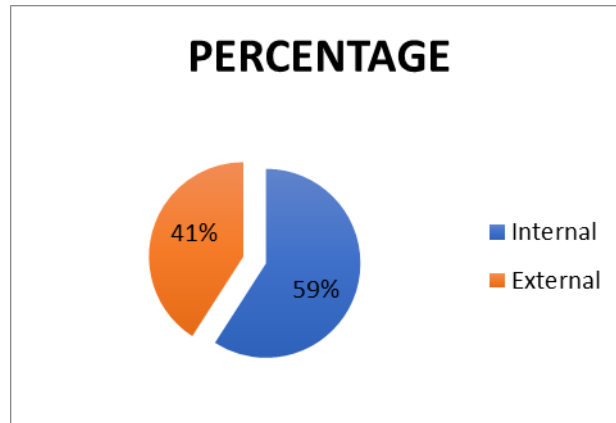


Figure 1: Distribution of Internal medicines and External medicines

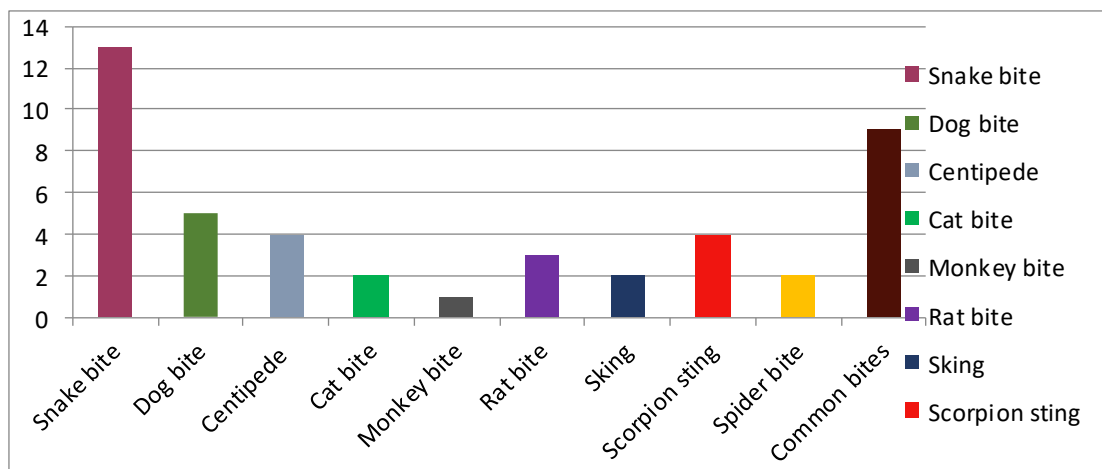


Figure 2: Number of Internal medicines for each bite

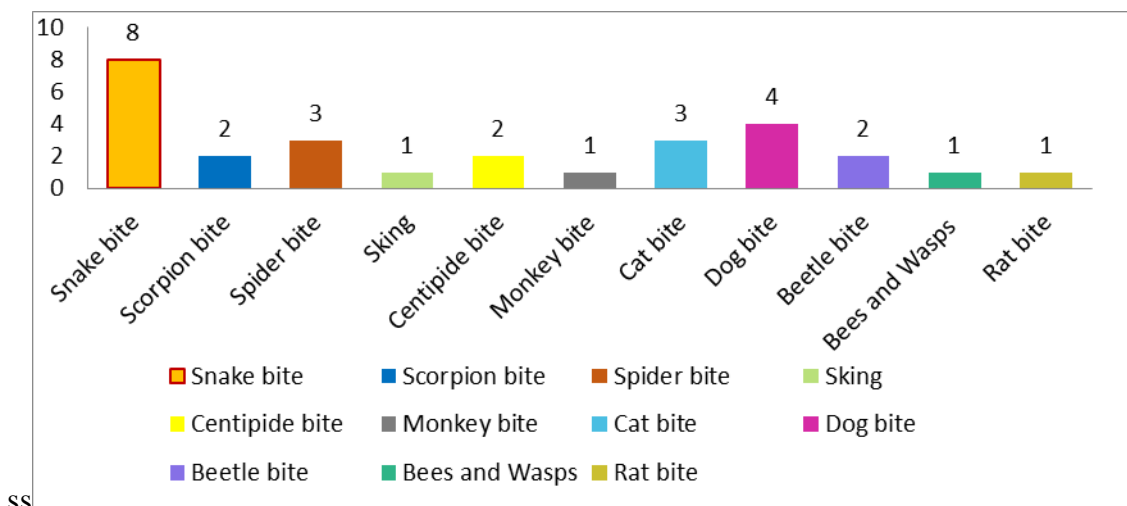


Figure 3: Number of External medicines for each bite

DISCUSSION

The traditional medical practitioners play a pivotal role in the health care system. In these four traditional medical practitioners, the knowledge is handed down from

generation to generation on how to prevent or treat disease and ailments. In treatment of poisonous bites some of them uses mantras. Most of them uses Naadi for the purpose of diagnosis. They detect the type of bite with

symptoms, facial appearance and bite marks.

The treatment is made according to the type of poison.

Both internal and external medicines are used by them. The current study says that most of the medicines given by them are prepared by themselves whereas the raw drugs were collected from nearby area or from shop. Vaidhyar Pradheesh mostly gives kashayam, Nasiyam, Karkam, Poochu whereas vaidhyar Francis mostly gives decoction, paste, poochu etc. Vaidhyar Bhagavati mostly gives Karkam, poochu and oil. Vaidhyar Suresh Kumar mostly gives decoction, Karkam and poochu. Every patient advised to follow the exact dosage with proper adjuvant while taking treatment. Usually medicines are given for minimum of 3 days to maximum of 48 days based on the type of bite with strict diet restrictions.

SUMMARY AND CONCLUSION

All the traditional practitioners in my study gives both internal and external medicine Naadi and bite marks are used for diagnostic purpose of poison bite and in the treatment.

The healers use mostly herbs for their treatment of poison bite and other diseases. There are varieties of plants (rare species) can be seen on their area

All the practitioners mainly give paste, decoction type medicine for poisonous bite as internally. And also, the main part in them is roots, bark and leaves.

Further study needed to evaluate the efficiency of root, bark and leaves which is used in poisonous bites treatment.

Some plants used for snake venom neutralization traditionally have been tested pharmacologically for their snake venom efficacy.

Practitioners gives medicine to each patient from minimum of 3 days to maximum of 48 days based on the type of bite with restricted diet. And also charges minimal rate of cost.

If the knowledge of medicinal plants is evaluated and utilized scientifically, mankind will be benefitted with the use of herbal drugs as part of their health care practices.

Declaration by Authors

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