



## Management for Viper Snake Bite with External Application in Siddha Medical System

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### ABSTRACT

**Background:** Pit vipers, such as the rattlesnake, copperhead, and cottonmouth (also called water moccasin), are poisonous (venomous) snakes. Symptoms of a pit viper snakebite usually appear within a few minutes to a few hours after a bite. If venom is injected, about 35% are mild envenomations, 25% are moderate envenomations, and 10% to 15% are severe. According to Siddha Toxicology, its mentioned 16 types of viper snakes in one book at the same time other school of thought; vipers are classified into 06 types. But management schedule of viper bite defined as specific type and general type internal and external medicines respectively. In this research only external managements were discussed.

**Objective:** to find-out & enumerate the external management for viper snake bite in siddha medical system, to identify mostly prescribed external application for viper bite.

**Methodology:** Literature review, Research design: collect the literature evidences from selected Tamil Siddha books. Grouping the collected data then presentation of the data with discussion and conclusion. Source of Literature: Siddha Toxicology, written by Dr. K. S. Murugesu Mudaliar.

**Result:** In this research revealed that, mostly prescribed external application was paste as 40% among the 06 types of the preparation types of the medicines for viper managements. Then, application of preparation was top in rank was site of snake bite as 61% out of 04 different application areas of body.

**Conclusion:** most of the viper bite managed by herbal paste and oil types of preparation (60%) and mostly apply on site of snake bite area was notified to management.

### Keywords:

Viper Snake Bite, External Application, Siddha Medical System

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## INTRODUCTION

Vipers are considered to be one of the most advanced groups of snakes, meaning that they display a large degree of divergence from the ancestral snakes. Depending upon the source, and allowing for taxonomic fluctuations, there are roughly 14 genera and approximately 85 viper species currently recognized.

Pit vipers, such as the rattlesnake, copperhead, and cottonmouth (also called water moccasin), are poisonous (venomous) snakes. They leave one, two, or three puncture marks on the skin, but you won't always see any marks. Symptoms of a pit viper snakebite usually appear within a few minutes to a few hours after a bite and may include: Severe, immediate pain with rapid swelling. Bruising of the skin. Trouble breathing. Changes in heart rate or rhythm. A metallic, rubbery, or minty taste in the mouth. Numbness or tingling around the mouth, tongue, scalp, feet, or the bite area. Swelling in lymph nodes near the bite. Signs of shock. Other symptoms may be caused by the bite itself or from fear or worry after being bitten. You may: Feel very worried or confused. Faint or feel like you might faint. Sweat and have chills. Be sick to your stomach or vomit. Feel weak or dizzy.

The severity of symptoms will depend on the type of snake that bit you, how much venom was injected with the bite (envenomation), and your personal health risks. Even if you do not have symptoms within 8 hours of a bite, continue to watch for symptoms for up to 2 weeks.

If you do not have symptoms within 8 to 12 hours, the snake might not have injected any venom; this is called a dry bite. At least 25%, perhaps up to 50%, of bites are dry.

- Dry bites or bites where only a very small amount of venom is injected may cause slight bleeding, pain, and swelling at the bite injury.
- If a moderate amount of venom was injected, you are more likely to have severe pain, swelling of the whole limb, and general ill feelings, such as nausea, vomiting, and weakness. Swelling of the whole limb is an effect of the venom and can cause compartment syndrome. This is rare.
- Large amounts of venom usually cause severe pain and severe swelling. You may have trouble breathing, moderate to severe bleeding, and signs of shock after this type of bite.

If venom is injected, about 35% are mild envenomations, 25% are moderate envenomations, and 10% to 15% are severe. According to Siddha Toxicology, its mentioned 16 types of viper snakes in one book at the same time other school of thought; vipers are classified into 06 types.

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## MATERIALS AND METHODS

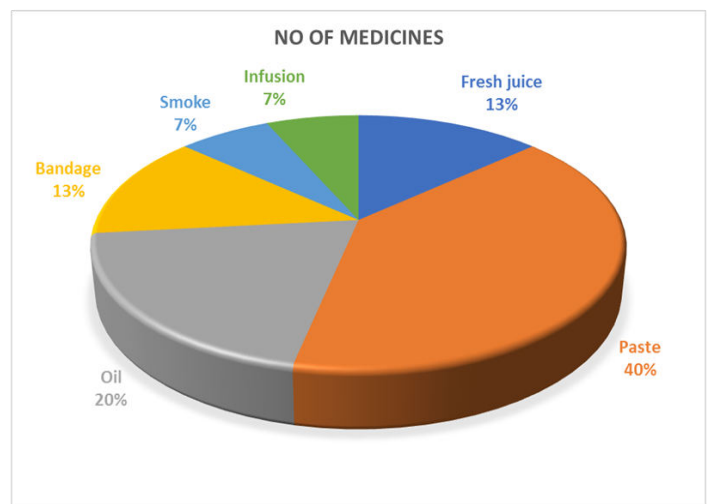
Research Type: Literature review

Research design: collect the literature evidences from selected Tamil Siddha books. Grouping the collected data then presentation of the data with discussion and conclusion.

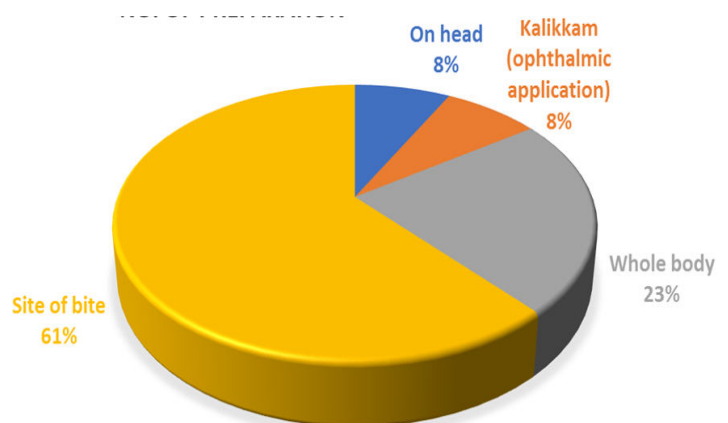
Source of Literature: Siddha toxicology, written by Dr. K. S. Murugesu Mudaliar, Revised by Dr. Pon. Gurusironmani and translated by; P. Jeyaraj, Published by. Department of Indian medicine and homoeopathy, Chennai 600 106.

## RESULTS

**Chart1: percentage of type of preparations**



**Chart2: percentage of application site for management**



**Table1: type of external applications and references**

| No  | Name mentioned in text                                | Type of medicine      | Application  | Type of viper     | Reference no.   |
|-----|---|-----------------------|--|-------------------|-----------------|
| 1.  | Neem oil application for pori viriyan bite            | Paste                 | On head  | Pori viper        | [1] page no:128 |
| 2.  | <i>Trianthema decandra</i> kallikkam & Juice          | Paste                 | Kalikkam (ophthalmic application)                              | Pori viper        | [1] p:128       |
| 3.  | Sundari oil   | Oil                   | Whole body   | Peru viper        | [1] p:130       |
| 4.  | Oil of Ant Hill with Sesame Oil                       | Oil                   | Site of bite   | Blood viper       | [1] p:132       |
| 5.  | <i>Sida cordifolia</i> leaves juice                   | Fresh juice           | Nasal inhalation   | 16 types of viper | [1] p:135       |
| 6.  | Juice of <i>tranquebar gendarussa</i>                 | Fresh juice           | Apply bite area, nasal inhalation, fomentation and embrocation | 16 types of viper | [1] p:136       |
| 7.  | Embrocation or liniment of <i>Trianthema dacandra</i> | Paste (with urine)    | Bitten spot and whole over the body                            | 16 types of viper | [1] p:137       |
| 8.  | Neem oil  | Oil                   | Whole body   | 16 types of viper | [1] p:137       |
| 9.  | <i>Vitis quadrangularis</i> bandage                   | Bandage               | Bite spot  | 16 types of viper | [1] p:137       |
| 10. | <i>Coryphe umbraculifera</i> bandage                  | Bandage               | Bite spot  | 16 types of viper | [1] p:138       |
| 11. | Mercury smoke   | Smoke                 | Inhalation   | 16 types of viper | [1] p:138       |
| 12. | Tomato paste  | Paste                 | Bitten spot  | 16 types of viper | [1] p:138       |
| 13. | Buffalo's dung paste                                  | Paste                 | Bitten spot  | 16 types of viper | [1] p:138       |
| 14. | <i>Desmodium latifolium</i> inhale                    | Infusion (into urine) | Instilled in the nose  | 16 types of viper | [1] p:139       |
| 15. | <i>Acalypha fruticosa</i> paste                       | Paste                 | Bitten spot  | 16 types of viper | [1] p:138       |

**Table 2: Type of Preparations**

| No. | Type of Preparation | No of medicines |
|-----|---------------------|-----------------|
|     | Fresh juice         | 2               |
|     | Paste               | 6               |
|     | Oil                 | 3               |
|     | Bandage             | 2               |
|     | Smoke               | 1               |
|     | Infusion            | 1               |

**Table3: application site for management**

| No. | Applications                      | No. of preparation |
|-----|-----------------------------------|--------------------|
| 1   | On head                           | 1                  |
| 2   | Kalikkam (ophthalmic application) | 1                  |
| 3   | Whole body                        | 3                  |
| 4   | Site of bite                      | 8                  |
| 5   | Nasal inhalation                  | 4                  |

## DISCUSSION AND CONCLUSION

According to the result; in this research revealed that, mostly 16 types of viper bite managements were mentioned and pori viper, peru viper, blood viper and white tailed viper bites also noted. And mostly prescribed external application was paste as 40% among the 06 types of the preparation types of the medicines for viper managements. Then, application of preparation was top in rank was site of snake bite as 61% out of 04 different application areas of body. And commonly used plant origin preparation only mercury smoke and animal origins also mentioned such as ant hill, buffalo's dung and urine.

In this research concluded as; most of the viper bite managed by herbal paste and oil types of preparation (60%) and mostly apply on site of snake bite area was notified to management.

**SOURCE OF FUNDING :** Nil

**CONFLICT OF INTEREST :** None declared

## REFERENCES

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