

## A SURVEY ON SNAKE BITE MANAGEMENT BY FOLKLORE PRACTITIONERS

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### ABSTRACT

Man started his life journey from forest, which was devoid of toxic environment, but he was not able to get rid of the organisms or the wild which made it inevitable for the origin of the science of the Toxicology. The classical school of medicine incorporating these science developed all these centuries reaching the general public, these further developed as Traditional knowledge restricting to individuals possessing the lineage of medical knowledge. Snake bite, a major socio medical problem of south East Asian countries. In India mostly in rural areas, Health centers are inadequate and snake bite victims mostly depend on Folklore healers and herbal antidotes, as an alternative treatment. A survey was conducted in and around *Chikmagalore* district. Single herbal preparations and compound preparations which were explored by the Folklore *Vaidyas* were discussed in detail. 26 plants used by Folklore healers for snake bite management were reported and discussed. In these review details of plant's local name, identification, useful parts, method of administration, were discussed which might be a stepping stone in establishing the future therapy against snake bite treatment and management.

**Keywords:** Ethno medicine, Folklore, Snake bite, Medicinal plants

### INTRODUCTION

Plants have been used in Folklore medicine for thousands of years. The knowledge of medicinal plants has been gathered from different medicinal systems such as *Ayurveda*, *Unani* and *Sidhha*. In India it is reported that Folklore healers used 2500 plant species, among which 100 species serves as regular source of medicine.<sup>1</sup> *Chickmagalur* district is the home of tribal's and forest dwellers more than 30% of the population consists of the tribal people with immense Traditional knowledge<sup>2</sup>. Multifarious uses of plants among multiethnic societies are all practice based on observations. Study of traditional or folk medicines of tribal's is called Ethno medicine<sup>3</sup>. A review of past literature on

Ethno Botany indicates that sufficient Research work has been done in various parts of India. The present study deals with the Ethno medicinal plants which are used by tribal people and method of snakebite treatments using these plants is discussed.

Snake is the very word evokes feelings of horror and disgust in most of us. Large tracts of forests that are home to innumerable snakes are being cleared for Agriculture. Snake bite till date remains a Public Health hazard in India. There are about 216 species of snakes identifiable in India, of which 52 are known poisonous. Considering the geographical pattern of whole world, it is estimated that the true incidence of snake bite/envenomation could exceed 5 million/year. About 1, 00,000 of

these develop severe sequel. Around 30-40 thousands of people die every day due to snake bite all over the World. Around 10,000-15,000 deaths are reported in India annually. Karnataka is one of the 13 states with highest prevalence of snake bite deaths. The study estimates that snake bites accounted for 2400 deaths in Karnataka in

2005. The common poisonous snake in India mainly include Indian Cobra (*Naja naja*), Common krait (*Bungarus caeruleus*), Russell's Viper (*Daboia russelii*), Saw-scaled Viper (*Echis carinatus*), have been reported from South india.<sup>14</sup> Majority of the world's population still rely on the folklore herbal medicine for their Health care.

Table 1: List of plants used against snake bite

Sanskrit	Latin name	Family	Kannada name	Constituents	Useful Part	Mode of administration
Vanamallika	<i>Jasminium angustifolium</i>	Oleaceae	Kaadu mallige	Carbonyl compounds like Jasmine, Jasmolactone	Leaves	Juice (internal)
Paata	<i>Cyclea peltata</i>	Menispermaceae	Haadi balli	Ethanollic Extracts	Leaves	Juice (internal)
Eshwari	<i>Aristolochia indica</i>	Asteraceae	Eshwari	Alkaloid Aristolodin Ishwararol	Root	Decoction (internal) paste (external)
--	<i>Diospyros andolleana</i>	Ebenaceae	Kaare gida	Seven Naphtha Quinone Derivatves	Root	-do-
Sarpaganda	<i>Rauwolfia serpentine</i>	Apocynaceae	Garuda patala	Calcium	Root	-do-
Ashwaganda	<i>Withania somnifera</i> <sup>9</sup>	Solanaceae	Ashwagandh	Oxirane Iodine Phenolic Plasticizer Compound	Root	-do-
Yastimadhu	<i>Glycyrrzia glabra</i>	Fabaceae	Jesta madhu	Licorice	Root	-do-
Allabu	<i>Lagenaria siceraria</i>	Cucurbitaceae	Kahi soore	6-C-Glucoside Apigenin, 6-C-9glucoside Luteolin	Fruit	-do-
Lajjalu	<i>Mimosa pudica</i>	Mimosaceae	Nachikemullu	Mimosine	Whole Plant	Decoction (internal)
Arkapatri	<i>Tylophora indica</i>	Asclepiadaceae	Aadu muttada balli	Tylophorine, Tylophorinine	Whole Plant	Decoction (internal) paste (external)
Dronapushpi	<i>Leucas aspera</i>	Lamiaceae	Thumbegide	Ursolic Acid And B-Sitosterol, Nicotine	Whole Plant	-do-
Anajani	<i>Memecylon malabaricum</i>	Melastomataceae	Olle kudi	Memecyclinin	Tender Leaves	paste (external)
Aranyajeraka	<i>Centratherum antihelmenthum</i>	Asteraceae	Kaadu jeerige	Piperazine Citrate	Seeds	Decoction (internal) paste (external)
Lashuna	<i>Allium sativum</i>	Liliaceae	Bellulli	Allicin, Ajoene	Pulp	-do-
Maricha	<i>Piper nigrum</i>	Piperaceae	Kaalu menasu	Piperine	Seeds	-do-
--	<i>Rhaphidophora pertus</i>	Araceae	Kandodi beelu	Methanol	Stem	Applied & tied with cloth
--	<i>Haemanthus multiflorus</i>	Liliaceae	May flower	2-O-Acetylchlidanthine	Tuber	Decoction (internal) paste (external)
Ativisha	<i>Aconitum hetrophyllum</i> <sup>10</sup>	Ranunculaceae	Maadri beru	Aconitinine	Root	paste (external)
Saptachakra	<i>Salacia reticulate</i>	Hippocrateaceae	Eka nayakana kette	Principal Phenolic	Stem	paste (external)
Aragwada	<i>Cassia fistula</i>	Cesalpiniaceae	Kakke mara	Anthrax Quinones	Bark	Decoction (internal)
--	<i>Plumeria rubra</i>	Apocynaceae	Kanagalu	Cytotoxic Iridoids	Bark	External application
Guduchi	<i>Tinospora cordifolia</i> <sup>12</sup>	Menispermaceae	Amritha bhalli	Cordifolone, Tinosporon, Tinosporic Acid	Whole Plant	Decoction (internal)
Manjista	<i>Rubia cordifolia</i>	Rubiaceae	Manjatte beru	Manjistinin	Whole Plant	Decoction (internal) paste (external)
Neelini	<i>Indigofera tinctoria</i> <sup>11</sup>	Fabaceae	Neeli gida	Indigotine, Indiruben	Leaves Flowers	-do-
Apamarga	<i>Achyranthus aspera</i> <sup>12</sup>	Amaranthaceae	Uttarani	Achyranthine	Root	-do-

**Experience during survey:** 15 traditional Vaidhyas were met during the survey but 10

people revealed the method and which drug they used for their treatment protocol. They

have shared their experiences during treating the patients. Here more concentration was regarding the drugs used by them. One interesting thing found was that few *Vaidhyas* did not mention the name of the drugs instead they showed that drugs. It is their belief that the drug loses its efficacy if they revealed the name of the drugs to others.

The study revealed 26 species of medicinal plants. The detailed information such as the Local name of the plant, Parts used, Dose and mode of administration were documented from the local people and traditional healers of *Chickmagalur* district. The drugs are being taken orally or in the form of decoction, juice and paste for external application.

Table 2: Pharmacological action of the few plants

Sl. no	Plants used	Biological activity
1	<i>Aristolochia indica</i>	Active principle destroys the toxic effects of all poisons especially snake poison and acts as blood purifier
2	<i>Rauwolfia serpentine</i>	Maintains extra cellular calcium concentrations are necessary for blood coagulation
3	<i>Achyranthus aspera</i>	Achyranthine – water soluble alkaloid, antipyretic activity
4	<i>Cyclea peltata</i>	Acts as diuretic activity
5	<i>Aconitum hetrophyllum</i>	Helps in blood stasis reduces pain and swelling
6	<i>Withania somnifera</i>	Used anti inflammatory properties
7	<i>Jasminum angustifolium</i>	Acts as emetic in all poisonous cases
8	<i>Lagenaria siceraria</i>	Extracts of flower shows antidote property to all kinds of poison
9	<i>Mimosa pudica</i>	The Extracts of roots shown significant neutralizing effects in the lethality of the venom of the cobra
10	<i>Allium sativum</i>	Ajoenes have been shown to possess antithrombotic (anticlotting) activity

### CONCLUSION

The Treatment protocol and the medicaments used by the Traditional practitioners, if analyzed retrospective way proves to be scientific. Need for awareness and interest to preserve and propagate these Traditional methods is essential before it gets extinct. Everyone should realize that going against nature is can survive only if we consider ourselves as a part of Eco-system. The active principles isolated have been associated with various Pharmacological properties and may provide a substantial contribution to the Modern therapeutics of snake bite. The drugs used by Traditional healers need to be identified and Research work should be done on each Plant and combinations, so that alternative

drugs for Anti snake venom will put forward.<sup>13</sup>

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