

**Research Article**

## **BOTANICALS USED ON THE TREATMENT OF SNAKEBITE IN SOME PARTS OF MAHARASHTRA**

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### **ABSTRACT**

Snakebite is a major health hazard that leads to high death ratio and great suffering in victims. It is estimated that, about 15,000 peoples die each year in India due to snakebite. Being a Tropical, Indian subcontinents have a variety of venomous and non-venomous snakes. Bites of the poisonous snakes cause death of the victims, if early treatments not done. In the present paper, some plants are enumerated, which are commonly used for the treatment of snakebite in the some parts of Maharashtra.

**Key Words:** Snakebite, Venomous, Non-Venomous

### **INTRODUCTION**

Snake bite remains a public health problem in many countries even though it is difficult to be precise about the actual number of cases. It is estimated that the true incidence of snake envenomation could exceed 5 million per year (Chippaux, 1998). It has been estimated that a million snakebites occur each year, In Asia alone, of which approximately 50% are envenomed, resulting in 1,00,000 annual deaths (Sanjib *et al.*, 2004). Although the environment, habitat and human activities determine the number of incidences due to various species, *Echis carinatus* claims the majority of bites in most parts of the subcontinent.

The use of plants against the effects of snakebite has long been recognized (Bocquillon-Limousin, 1891), even in modern times, but only for the last 20 years has it merited closer scientific attention (Walter B. Mors *et al.*, 2000). In Maharashtra state, due to lack of well developed transport and Communication facilities, many rural, tribal and community people get affected by poisonous snakebites. The major families of snakes in India are Elapidae, Viperidae and Hydrophidae. The four major venomous biting species are Cobra (*Naja naja*), Krait (*Bungarus caeruleus*), Russell's viper (*Vipera russelli*), and Saw-scaled viper (*Echis carinatus*) (Meenatchisundaram and Michael, 2009). No of Agricultural workers, woman and children are most noticeable in this. To get rid of this severe problem, these peoples have developed their own medical system by using local medicinal plants. *Abrus precatorius*, *Achyranthes aspera*, *Cocculus hirsutus*, *Costus speciosus*, *Desmodium triquetrum*, *Gmelina arborea*, *Hemidesmus indicus*, *Momordica dioica*, *Wrightia tinctoria* etc, are some medicinal plants commonly used by the rural and hilly people for the treatment of snakebite.

Though, these plants will not be a permanent remedy on snakebite, surly the use of these plants may elongate the period of death, so as a victim can reach to a medical practitioner before death.

### **MATERIALS AND METHODS**

The information about the plants used on snakebite has been collected from the rural people residing in the villages as well as hilly regions of the Maharashtra. Several visits were given to the different districts of Maharashtra in different seasons. Appointments of farmers, senior citizens, local medicine men, vaidus and especially victim persons were taken to collect the information about the important plants used to cure snakebites. The interesting and unknown plants were collected during survey, identified by using local flora (flora of Maharashtra, 2001) and preserved in the form of herbarium.

The data on medicinal plants for treatment snakebite was collected from local people residing in different regions of Maharashtra, were analyzed. The enumeration and utilization of these are described in-Table.1.

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**Table I: Plants and their uses**

| Name of the plant & family                                             | Local Name         | Parts Used    | Mode of prescription                                                                                   |
|------------------------------------------------------------------------|--------------------|---------------|--------------------------------------------------------------------------------------------------------|
| <i>Abrus precatorius</i> Linn.<br>(Fabaceae)                           | Gunj.              | Roots         | Paste of fresh roots should immediately apply on the place of snakebite.                               |
| <i>Achyranthus aspera</i> Linn.<br>(Amaranthaceae)                     | Aghada.            | Leaves        | 2 teaspoonful of leaf juice given to the victim orally.                                                |
| <i>Argemone maxicana</i> Linn<br>(Papaveraceae)                        | Bilait             | Seeds         | Powder of seeds mixed with water and applied on the bite site.                                         |
| <i>Balanites aegyptiaca</i> (L.) Del.<br>(Balanitaceae)                | Hinganbet          | Leaf          | Leaf juice is given to the victim immediately after bite.                                              |
| <i>Biophytum sensitivum</i> (Linn.)<br>DC. (Oxiladaceae)               | Lajalu             | Whole plant   | The plant juice is very effective as a antidote on snakebite.                                          |
| <i>Boerhavia diffusa</i> Linn.<br>(Nyctaginaceae)                      | Punarnava          | Roots         | Fresh roots are chewed to minimize the action of snake poison.                                         |
| <i>Calotropis procera</i> (Ait.)<br>R.Br.<br>(Asclepiadaceae)          | Rui.               | Leaves        | Leaves are eaten by Victim till it tastes bitter to neutralize the poison. (It tastes sweet to victim) |
| <i>Cassia tora</i> Linn.<br>(Cesalpiniaceae)                           | Tarota             | Roots         | Root paste is applied on the fractured part.                                                           |
| <i>Citrullus colocynthis</i> (Linn.)<br>Schrad.<br>(Cucurbitaceae)     | Indrayan.          | Roots, fruits | Root or fruit paste if applied on the bitten place, it minimizes the activity of poison.               |
| <i>Cocculus hirsutus</i> (Linn)<br>Diels.<br>(Menispermaceae)          | Vasanvel           | Root          | Root are given to chew for the victim.                                                                 |
| <i>Cyperus rotundus</i> Linn.<br>(Cyperaceae)                          | Nagarmotha         | Rhizomes      | Fresh or powdered rhizomes are given with cow butter is given to the victim after snakebite.           |
| <i>Drimia indica</i> (Roxb.)<br>Jessop.<br>(Liliaceae)                 | Ran Kanda          | Bulbs         | The bulb should crushed and apply on the site of snakebite.                                            |
| <i>Euphorbia caducifolia</i> Haines.<br>(Euphorbiaceae)                | Ek kadi<br>nivdung | Roots         | Root powder with black pepper powder is given to the victim.                                           |
| <i>Gymnema sylvestre</i> (Retz.)<br>R.Br.ex Schult<br>(Asclepiadaceae) | Aphumari.          | Leaves        | Leaves to be chewed after snakebite to neutralize activity of poison.                                  |
| <i>Lavandula bipinnata</i> (L.) O.<br>Ktze.<br>(Lamiaceae)             | Galgota.           | Leaves        | Leaf juice is given internally to the victim.                                                          |
| <i>Momordica dioica</i> Roxb. Ex<br>Willd.<br>(Cucurbitaceae)          | Kartoli.           | Roots         | Fresh roots should chew immediately after bite.                                                        |
| <i>Murraya koenigii</i> (Linn.)<br>Spreng. (Rutaceae)                  | Kadipatta.         | Leaf          | At least 2 leaves should eaten immediately after the bite.                                             |
| <i>Peristrophe paniculata</i><br>(Forssk.) Brummit.<br>(Acanthaceae)   | Aghedi             | Leaf          | Leaf paste is applied on the site of bite.                                                             |
| <i>Tephrosia purpurea</i> (Linn.)<br>Pers.<br>(Fabaceae)               | Unhali.            | Roots         | Roots are chewed as an antidote against snake poison.                                                  |
| <i>Wrightia tinctoria</i> R.Br.<br>(Apocynaceae)                       | Kala kuda          | Bark          | Bark powder is used as a antidote on snake bite.                                                       |

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#### **RESULTS AND DISCUSSION**

The present study enlightens on such a 20 plants belonging to various families which are used by local people of some parts of Maharashtra state to treat snakebite before reaching to hospital. Different plant parts of various plants are used for the treatment. Perhaps, because these parts would contain some active principles against snake poison. The prescription of these products is with other some medium like water, milk, butter etc or these drugs are given separately.

In the present study it is clear that, roots of maximum plants are used as a remedy on snake poison followed by leaves. Use of other plant parts like seeds, fruits, rhizome, bulb and bark is comparatively less. Very few plants are used solely used in the treatment.

The plants play a very vital role in the livelihood of people residing in villages and hilly parts of state as they fulfill all the basic needs. These people have to face the problem of some dangerous ailments like snakebite daily. So, they developed their own medical system by the utilization of the local plants by trial and error method. In order to keep their medical system update and existence of the plants as it is, it is very important to conserve these wild medicinal plants and information of their utilization on various ailments should recorded properly. Because day by day, the wild medicinal plants are getting lost due to some manmade and natural calamities.

In the table 1 the plants are arranged as per Bentham and Hookers classification system with their families, local name, parts used with the prescription and their use on snake bite.

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