INTERNATIONAL JOURNAL FOR INNOVATIVE RESEARCH IN MULTIDISCIPLINARY FIELD ISSN: 2455-0620 Volume - 7, Issue - 10, Oct – 2021
Monthly, Peer-Reviewed, Refereed, Indexed Journal with IC Value: 86.87 Impact Factor: 6.719
Received Date: 15/10/2021 Acceptance Date: 28/10/2021 Publication Date: 31/10/2021

Traditional Herbal Medicines for the Treatment against Snake Bite

[1]Meshram S.M., [2]Mohture V.M.* and [3]Kayarkar A.R.*

[1]Manoharbhai Patel College of Art, Commerce and Science Sakoli. Dist. Gondia. 441901. MS
[2, 3]Rashtrapita Mahatma Gandhi Art's & Science College, Nagbhid, Dist. Chandrapur (M. S.) 441205
Email - vikasmohture@gmail.com ankushkayarkar92@gmail.com

Abstract: *Since prehistoric time plants has been known to use for different diseases. In India variety of medicinal plants found in different geographical and ecological conditions. So many medicinal plants are used against snake bite either singly or with combination of other plant. The present study was undertaken to recollect information regarding medicinal plants used for snake bite treatment in Deori Tehsil of Gondia district (MS). The information was obtained from Local healers, aboriginal people and local peoples from the area. The data have been compiled with emphasis on the plants, family, local name, parts used etc. 9 different plants were documented during investigation from the study area which belong to 9 different families that act as antidotes against snake bites.*

Key Words: *Antidote, Snake bite, Medicinal plants, Local healers.*

1. INTRODUCTION:

Human being, from the history of his evolution he is dependent on the nature for his fundamental needs viz. food, shelter, cloths and medicines. This dependency led the aboriginal people to develop an exclusive system of knowledge about plants; which play several important functions in human life. These aboriginal peoples made a sustainable agriculture and natural-resource development which means the utilization, management and conservation of the natural resource base and the orientation of technological change to ensure the attainment and continued satisfaction of human needs for present and future generations [1].

Local healers are the group of people known as "Vaidya or Vaidu" (A person having traditional knowledge of medicinal plants and medicine preparation). According to the World Health Organization, most populations still rely on traditional medicines for their psychological and physical health requirements [2]. In recent past new allopathic drugs have been invented but have many side effects. The plant based medicines have no side effects on the human body. Due to the various undesirable effects of some modern-day drugs, an increasing number of people from both developed and developing countries have turned towards medicinal plants [3].

India is a developing country with the majority of its population living in the rural areas. A typical rural life of Indians includes the houses made with the mud with agriculture in the adjoining areas, herbs, shrubs and trees making the habitat more suitable for the venomous snakes. Villagers are commonly facing the problem of snake bite but these villages do not have any readily available modern medical facilities until they reach to the nearby city area. Common peoples have myth that every snake is poisonous. Of the 2,700 known species of snakes, only about 300 are venomous and rest are non-venomous. Worldwide about 30,000 to 40,000 people die annually because of snake bites. Of these, about 25,000 people die in India, mostly in rural areas [4].

Rural people are dependent on Vaidus for their therapeutic needs unless the disease is complicated. Most of the Vaidu medicinal therapy is based on crude drug where whole plant or plant part is used for treatment in the form of juice, decoction, paste or pills, the administration being either oral or topical depending on the nature of the disease. Venomous snake bites are also treated by vaidus with plants [5].

While there are so many plants reported to use against snake bite, this study concentrate on the plants used by aboriginal and local peoples of the Deori tehsil of Gondia district of Maharashtra state (India).

2. MATERIALS AND METHOD:

Investigation region: The present study was undertaken in Deori Tehsil of Gondia District. Deori Tehsil is the western most district of the Vidharbha, of the Maharashtra State. The district is situated between 21^0.04'N and 80^0.22'E. The people of the study area are basically agriculturists and most of them are having domestic animals such as cow, goat, sheep and buffalos. The area has not well supported with the veterinary doctors and hospitals. This facility is present only in the center place Deori from which the distance of different villages is nearly 4 km to 25 kms. After snake bite local healers treat the patient with locally available medicinal plants. Deori is surrounded by deep forest with large number of wild plants and animals. This area is attached to the Nagzira Tiger Reserve forest as well as Navegaon Reserve forest.

Acquisition of Data: The information was collected by arranging field trips once in a week from July 2015 to June 2016 in the nearby villages of Deori Tehsil through interviews and informal conversation with traditional healers, knowledgeable person, Vaidus, experienced and aged person (Fig. 1). Ethnoveterinary information included with the local name of the particular plant, parts utilized, medicinal uses and methods of preparation and administration were documented. The collected ethnoveterinary information was recorded on field note books and plants were identified using relevant scientific literature [6, 7, 8, 9, 10]. Regular field visits were planned to document the plant in flowering period.

3. RESULT AND DISCUSSION:

In the present investigation a total 9 plants belonging to 9 families were documented as the plants used by Vaidus of Deori tehsil (Table 1 and Fig. 2). A detail information including scientific name, family, local name, parts used and their medicinal value by the peoples is given in Table No.1. As this study area is surrounded by the deep forest, the vaidus collect the plants and plant parts like roots, stem, leaves from the adjoining area and from the deep forest too.

Achyranthes aspera commonly called as Agadha is noted to be given against snake bite by the vaidus of Deori area. They suggest oral administration of the root powder while paste is applied over wounds. Many researcher [11, 12, 13] reported that same plant was used against snake bite. Fresh leaves or roots of *Abrus precatorius* with seeds paste in cold water is used against snake bite. Other researchers [11, 14, 15, 16] also reported the use of *Abrus precatorius* in the treatment of snake bite. The rhizome powder of *Adiantum philippense* is used as anti-poisonous by the vaidus of Deori region. Malviya *et al.*, [17] also reported the use of rhizome powder of *Adiantum philippense* against snake bite.

Alangium salvifolium, the root-bark powder is used as an antidote for snake bite. *Alangium salvifolium* was reported to use as antidote for snake bite by many healers in other parts of the planet [18, 19, 20]. Tribal peoples of Deori used fresh plant juice of *Andrographis paniculata* twice a day for seven days to treat against snake-bite and scorpion-bite. Other researchers [11, 13, 14, 16, 19, 21] also reported that the *Andrographis paniculata* were used in the treatment of snake bite by many traditional healers.

Local peoples say that plant extract of *Bacopa monnieri* is used against snake bite and scorpion bite. Malayali tribals and rural people in Salem district of Tamilnadu (India) used *Bacopa monnieri* for the treatment of snake bites [19]. Root paste of *Gloriosa superba* is used as antidote for the venom of snake by the vaidus of study area. Other researchers reported the same from different areas of India [11, 22]. Malayali tribals and rural people in Salem district of Tamilnadu (India) used *Gloriosa superba* for the treatment of snake bites [19].

Local people of Deori used the leaf juice of *Uraria picta* in treatment of snake bite. Jain and Singh, [23] reported that tribal people of Raigarh (Chhatisgarh) used this plant in the treatment of snake bite. Tribals of Deori region used the leaf extract of *Vitex negundo* against snake bite. Sarkhel [24] reported that the tribal communities of Paschim Medinipur district, West Bengal used this plant in treatment of snakebite. Other researcher reported that same plant was used for the same purpose in different localities of India [11, 13, 14, 19].

4. CONCLUSION:

From the present study it is concluded that the medicinal plants play an important role in the day to day life of tribal peoples which provides a sound relationship between the aboriginal peoples and the ecosystem. This study leads toward the documentation of precious traditional knowledge of medicinal plants which were passed from generation to generation by the means of only verbal communication. In the present study a total 9 plants belonging to 9 families were documented as the plants used by Vaidus of Deori tehsil against the snake bite.

5. ACKNOWLEDGMENT:

The authors express sincere thanks to traditional healers, Vaidus and local people of Deori region who co-operated in sharing their knowledge at the time of study.

Table 1: List of Plants documented during investigation

S. N.	Botanical name	Local name	Family	Medicinal uses
1.	*Achyranthes aspera* L.	Agadha	Amaranthaceae	Root powder is used orally and paste is applied on wound.
2.	*Abrus precatorius Linn*	Gunj	Leguminoceae	Fresh leaves or roots with seeds paste in cold water is used. Whereas root powder is applied topically.
3.	*Adiantum philippense L.*	Hamsapadi / Lal laajaalu	Pteridaceae	The rhizome powder is used as anti-poisonous.
4.	*Alangium salvifolium L. F. Wang.*	Ankol	Cornaceae	The root-bark powder is used as an antidote for snake bite.
5.	*Andrographis paniculata* Burm.	Bhui-neem	Acanthaceae	Fresh plant juice is used twice a day for seven days to against snake-bite and scorpion-bite
6.	*Bacopa monnieri* L.	Jadpala	Scrophulariaceae	Plant extract is used in snake bite and scorpion sting.
7.	*Gloriosa superba* L.	Kal-lavi	Liliaceae	Root paste is used as an antidote against snake bite for veterinary practice.
8.	*Uraria picta* Desv.	Pitvan/ Prishniparni	Fabaceae	Leaf juice is used for snake bite.
9.	*Vitex negundo* L.	Nirgudi	Verbenaceae	The leaf extract is used against snakebite (Veterinary practice).

Fig. 1: Interaction with the traditional healers of study area

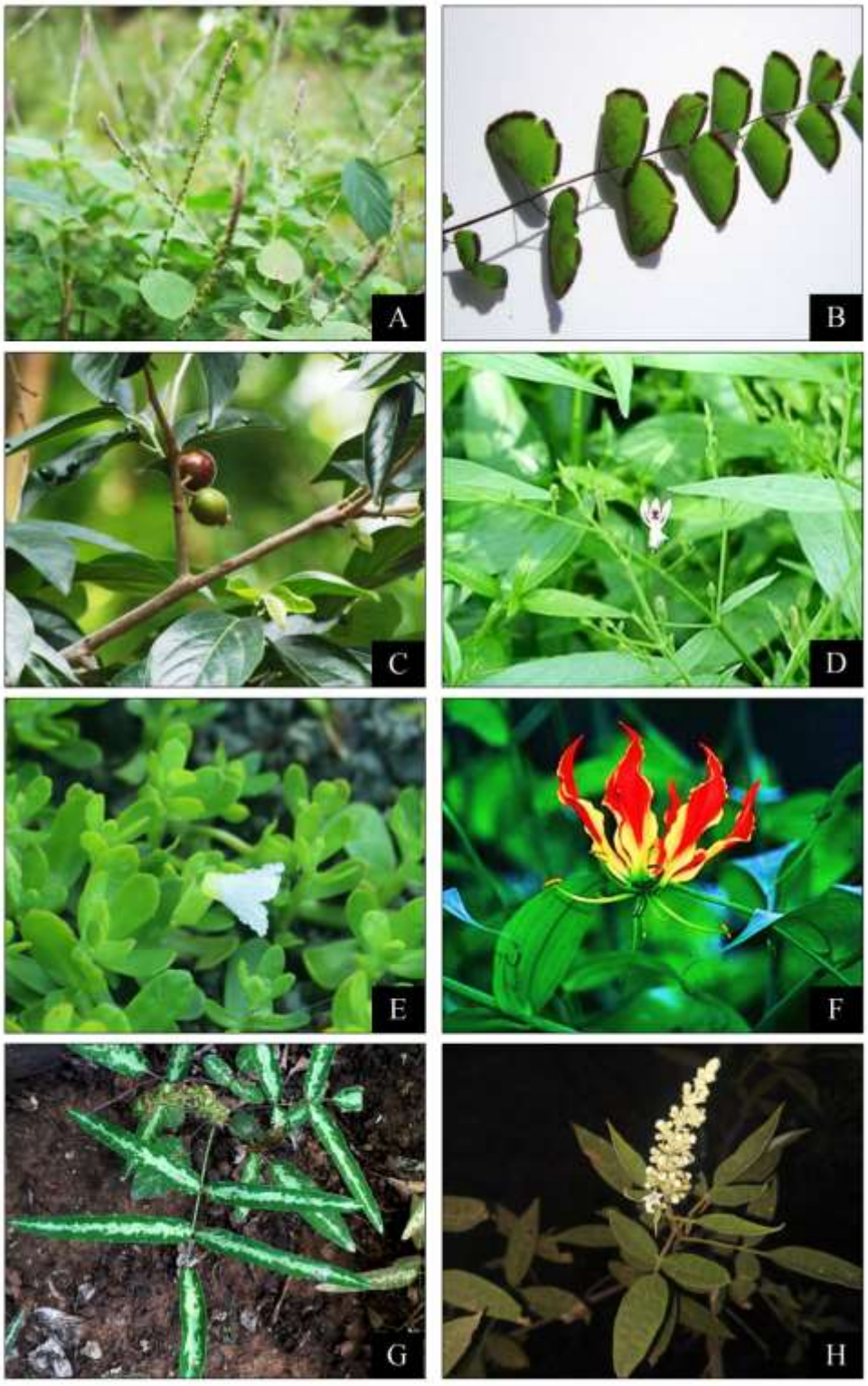

Fig. 2: Documented plants

A: *Achyranthes aspera* B: *Adiantum philippense*
C: *Alangium salvifolium* D: *Andrographis paniculata*
E: *Bacopa monnieri* F: *Gloriosa superba*
G: *Uraria picta* H: *Vitex negundo*

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