

Traditional Herbal Medicines for the Treatment of Snake Bite and Scorpion Sting by the Tribes of South Surguja, Chhattisgarh, India

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Abstract

Snake bite is a common acute medical emergency faced by rural population in tropical and subtropical countries and in humid climate; therefore, people need to counter these types of emergencies. The Cherwa and Pando tribes were surveyed during June to July 2008, to gather information on the traditional uses of medicinal plants used in health care by them. Tribes of South Surguja use 10 plants for snake bite and 05 plants for scorpion sting. A particular family uses a particular variety of a plant species as a tradition for treatment of snake bite and scorpion sting. The study indicates that tribes depend on medicinal plants for health care.

Keywords: Herbal medicine; Tribes; Snake bite; Scorpion sting; South surguja

Introduction

Snake bite and scorpion sting are major health hazards that lead to high mortality and great suffering in victims. The monopoly of snake bite healers is because they do not give information to the people, partly due to their unknown matria medica, and occult-mystical nature of their practice. Conservative sources of snake bite estimate that the number of accidents globally reach one million and more than 20,000 deaths, annually. In India alone, more than 200,000 cases of snake bite are reported and estimated 35,000 to 50,000 people die each year. In Kenya, it is estimated that only 19% of the annual 151 snake bite per 100,000 people were potentially of venomous snakes [1-3].

The ethnic and rural people of India have preserved a large number of traditional knowledge of medicinal uses of plants growing around them. The information on medicinal uses of the indigenous plants has been described after gathering it from local people, experienced aged rural folk, and traditional herbal medicine practitioners

Materials and Methods

The study site

Chhattisgarh State has a rich forest, covering 44% of the total geographical area of the state. Hence, Chhattisgarh has been declared as "Herbal State", owing to its rich floral diversity and encompassing wealth of invaluable indigenous traditional knowledge base, inherent with tribal folk. Surguja district is located in the northern part of Chhattisgarh State of India. This district extends between south-eastern parts of Vindhya-chal- Baghrlkhand region of peninsular India. It lies between 23° 37'25" to 24° 6'7" north latitude, and 81° 4'40" east longitude. The area of the district is 16030 sq. kms, while 8655 sq. kms area is under forest. This district is situated at the even land of Satpuda hill ranges. High ranges and hillocks have surrounded this district from all the sides. The district bears sandy soil in most of the parts; whereas, the black soil is also scarcely available.

The Odgi block of Surguja district is inhabited by the Cherwa and Pando tribes. The objective of this study is to assess the richness of ethnomedicinal plants species used by the Cherwa and Pando tribes in Odgi block of South Surguja Division, forest areas of Chhattisgarh, and the traditional medical practices of the people. The conservation of ethnobotanical resources and wild relatives of crop plants is vital for future breeding programme.

In the present study, 08 tribal villages in the Odgi block of Surguja district, Chhattisgarh, were surveyed to gather information of plants and plant products used by the tribes from July-August 2008. Information on medicinal plants, local name, plant parts used, and mode of administration for curing diseases, has been recorded. All the plants species are identified with the help of publishing flora [1,4,5].

Results

The Cherwa and Pando tribes prepare paste, pills, powder, decoction, infusion, and aqueous extracts of medicinal plants, either singly or in combination with other plants and minerals. Data obtained from field survey are presented in table 1. In this study, 14 plant species belonging to 13 families have been recorded. Common health ailments in the study area are snake bites and scorpion sting, and the largest number of the remedies (10 remedies from 10 species) is used in snake bite ailments. On the other hand, 05 remedies are used in scorpion sting. Snake bite and Scorpion sting ailments are common problems of this area, particularly in rainy season. The data gathered from the Cherwa and Pando tribes, compared with the uses of those species are recorded in the work on medicinal plants in India [1,6-9]. The ethnomedicinal plants are arranged, giving information on botanical names, family, English name, local name and ethnomedicinal recipes, and also listed the name of traditional healers who have given such kind of information about snake bite and scorpion sting (Table 2).

In this, five snake bite patients have been interviewed for the confirmation of the treatment given by healers.

Discussion and Conclusion

This study shows that knowledge and use of herbal medicine for the treatment of various ailments among Cherwa and Pando tribes is

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S.N.	Disease Name	Plant Species	Botanical Name	Family	Plant part used
1	Snake bite	Annatmul	<i>Hemidesmus indicus</i> Linn (R. Br.)	Asclepiadaceae	Root
		Khadhar	<i>Gardenia turgida</i> Roxb.	Rubiaceae	Root
		Mithi Variyari	<i>Scoparia dulcis</i> Linn.	Scrophulariaceae	Whole plant
		Lajwanti	<i>Mimosa pudica</i> Linn.	Fabaceae	Whole plant
		Kenwch	<i>Mucuna pruriens</i> Linn.	Fabaceae	Root
		Rohina	<i>Soymida febrifuga</i> Roxb.	Meliaceae	Bark, root
		Haldu	<i>Haldina cordifolia</i> Roxb.	Rubiaceae	Bark, leaf
		Bada Charota	<i>Cassia obtusifolia</i> Linn.	Fabaceae	Seed
		Apamarg	<i>Achyranthes aspera</i> Linn.	Amaranthaceae	Root
2	Scorpion sting	Sarphonk	<i>Tephrosia purpurea</i> Linn.	Fabaceae	Root
		Ber	<i>Ziziphus mauritiana</i> Linn.	Rhamnaceae	Root
		Saliha	<i>Boswellia serrata</i> Roxb.	Burseraceae	Bark
		Apamarg	<i>Achyranthes aspera</i> Linn.	Amaranthaceae	Root
		Bhatkataiya	<i>Solanum xanthocarpum</i> Sachrad & Wendl.	Solanaceae	Root
Arand	<i>Ricinus communis</i> Linn.	Euphorbiaceae	Root		

Table 1: List of medicinal plants and their uses of treatment of different diseases by tribal people of Odgi block.

S.N.	Botanical Name and Family	Local Name	Uses	Part used	Habit	Mode of preparation and/or administration	Name of healers
1	<i>Achyranthes aspera</i> Linn. (Amaranthaceae)	Apamarg	Scorpion sting and snake bite	Fresh root	Herb	Root extract is prepared in drinking water and given orally once a day.	Sipahi Lal
2	<i>Hemidesmus indicus</i> (Linn) R. Br. (Asclepiadaceae)	Annatmul	Snake bite	Fresh root	Shrub	Aqueous extract of root is prepared in water and given orally, two or three times a day.	Mohan
3	<i>Gardenia turgida</i> Roxb. (Rubiaceae)	Khadhar	Snake bite	Fresh root	Small tree	5 g of roots are crushed and mixed with 200ml of drinking water. Root paste along with water is given orally in twice a day.	Shivpal
4	<i>Scoparia dulcis</i> Linn. (Scrophulariaceae)	Mithi Variyari, Mithi Patti	Snake bite	Whole plant	Herb	50 g of whole plant together with 50g of whole plant of <i>Phyllanthus amarus</i> and 50 g <i>Sida acuta</i> (whole plant) are made into paste and mixed with 250 ml of drinking water and given orally in twice a day for 1-2 days.	Krishna Kumar Anup Lal and Bilku
5	<i>Mimosa pudica</i> Linn. (Fabaceae)	Lajwanti	Snake bite	Whole plant	Shrub	50 g of whole plants are made extract in 250 ml of drinking water and shaken well and filtered. Extract of whole plant is given twice a day in one day only.	Shiv Prassad
6	<i>Mucuna pruriens</i> Linn. (Fabaceae)	Kewanch	Snake bite	Fresh root	Climbing shrub	5 g of roots of plant are crushed and mixed with 200 ml of drinking water. Aqueous extract of root is given orally for twice a day.	Bhaiya Lal
7	<i>Soymida febrifuga</i> Roxb. (Meliaceae)	Rohina	Snake bite	Bark	Tree	50 g fresh bark of this plant together with 50 g root of <i>Holarrhena pubescens</i> are made into paste, and mixed with 200 ml of drinking water and given orally three times a day for three days.	Ramsurat
8	<i>Haldina cordifolia</i> Roxb. (Rubiaceae)	Haldu, Karmi	Snake bite	Bark	Tree	50 g fresh bark of this plant together with 50 g root of <i>Butea monosperma</i> are made into paste, and mixed with 250 ml of drinking water and given twice a day for two days.	Rampal and Shiv Prassad
9	<i>Tephrosia purpurea</i> Linn. (Fabaceae)	Sarphonk	Snake bite	Root	Herb	Aqueous extracts of root is prepared in 250 ml of drinking water. Aqueous extract of root is given orally for three times a day for one day.	Ramlakhan
10	<i>Cassia obtusifolia</i> Linn. (Fabaceae)	Bada Charota	Snake bite	Seed	Herb or shrub	5 g of dried seed paste along with 200ml of drinking water is given orally a twice a day for one day.	Rampal
11	<i>Ziziphus mauritiana</i> Linn. (Rhamnaceae)	Ber	Scorpion sting	Root	Tree	5 g of fresh root is eaten.	Budhram
12	<i>Boswellia serrata</i> Roxb. (Burseraceae)	Saliha	Scorpion sting	Bark	Tree	Paste of the fresh stem bark is applied externally on to scorpion sting.	Babulal
13	<i>Solanum xanthocarpum</i> Sachard & Wendl. (Solanaceae)	Bhatkataiya	Scorpion sting	Root	Herb	Paste of 50 g fresh roots along with 200 ml of drinking water is made into aqueous extract and given one time a day.	Sipahilal
14	<i>Ricinus communis</i> Linn. (Euphorbiaceae)	Arand, Rendi	Scorpion sting	Root	Shrub	Paste of the 100 g fresh root of the plant along with 250 ml of drinking water is given orally and eaten also for scorpion sting at one time for one day.	Sipahilal

Table 2: List of medicinal plants and their uses of treatment of different diseases by tribal people of Odgi block.

still a major part of their life and culture. They use forest plants, weeds, fruit plants, vegetables, ornamental plants, ferns, and many others as traditional medicine. The uses of mixtures of plant species in treatment of particular diseases are common in the other part of country [10,11]. Snake bites in rural areas are commonly treated with plant extracts [12,13]. In general the plant families *Compositae*, *Fabaceae* and *Solanaceae* are well represented in East African compendia. The frequent uses of leaves and roots are antivenin preparation is noted by Watt et al. and Bennett et al. [14,15]. The leaves and roots are the two major plant parts which are frequently used for the treatment of diseases by the local people. The results of the present study provide evidence that medicinal plants continue to play an important role in the healthcare system of this tribal community of Chhattisgarh, India.

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