

Taxonomic Validation of Crude Drugs used for Poisonous Bites by Adivasis of Rayalaseema Region, Andhra Pradesh

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ABSTRACT

The present report deals with the phytotherapeutic properties of certain potential anti-poisonous crude drugs used by the Adivasis, inhabited in the forests of Rayalaseema region of Andhra Pradesh. The critical taxonomic analysis yielded twenty species belonging to 17 families of angiosperms used for poisonous bites. The majority of drug formulations (14 spp.) were administered as antidotes for snake bites.

Key words: Crude drugs, Poisonous bites, Rayalaseema region.

INTRODUCTION

Since time immemorial plants play an important role in the spiritual as well as physical well being of the mankind. The indigenous people depend either directly or indirectly on the forests for their daily needs and preserve the knowledge about the traditional and cultural uses of plants as family secrets. It is necessary that unwritten folklore uses of plant products must be documented and preserved. In this connection an attempt was made to collect folklore information about poisonous bites from Rayalaseema forests. The critical review of literature (Jain, 1991; Kirtikar and Basu, 1935; Rama Rao and Henry, 1996) revealed that very few and sporadic attempts were made on crude drugs used for poisonous bites (Reddy et al., 1996 and Imam et al., 2003). Hence, the present investigation gains importance.

Study area

Rayalaseema is the southern part of Andhra Pradesh, comprises of Anantapur, Kadapa, Chittoor and Kurnool districts. It is situated almost in the centre of southern part of the Indian peninsula. Geographically it is located between 12° 30' and 16° 15' N latitudes and 76° 55' and 79° 55' E longitudes, covering 23.95% of the total area of the state. It is bounded on the south by Tamilnadu, on the west by Karnataka, while Telangana and Coastal regions

of Andhra Pradesh forms the north and east boundaries respectively. The Rayalaseema has no coastal line and is accessible only by land. The major soil types of the area are red soils, red loams and black cotton. The main tribal communities of the area are chenchus, sugalis, yanadis and yerukalas and most of them scattered all over the region except Chenchus, who have restricted distribution in the Nallamalais of Kurnool district only.

METHODOLOGY

Ethnobotanical exploration trips were made to collect first hand information about therapeutic properties of plants from tribal and rural people, inhabited in and around the forests. The information about therapeutic properties of plants used in folk medicine was obtained through direct observations and discussions with tribal men. Data was recorded on the plant parts used, local name, place of collection, process of preparation, mode of administration and dosage. The voucher specimens were prepared for authentication of information and for future references. The specimens were identified with the help of local/regional floras (Gamble, 1935; Venkata Raju and Pullaiah, 1995) and deposited at Sri Krishnadevaraya University herbarium (SKU), Anantapur.

ENUMERATION

The collected drug yielding species were systematically analyzed and enumerated in alphabetical order. The enumeration of taxa includes botanical name with voucher number, common name, family, habit, part used, purpose and mode of administration (Table 1). The new and hitherto not reported crude drugs were indicated with asterisk.

DISCUSSION AND CONCLUSION

The present study mainly deals with less known crude drugs used against poisonous bites used by Adivasis of Rayalaseema region of Andhra Pradesh. The critical analysis of the data in the light of literature resulted twenty species belonging to 17 families of Angiosperms. Among them five species i.e. *Coccinia indica*, *Habenaria roxburghii*, *Tribulus terrestris*, *Pavetta breviflora* and *Viscum articulatum* were hitherto not reported by earlier workers. The results indicate that, snake bite is very common in the tribal habitations than other poisonous bites and about eleven drug formulations have been administered in raw form and three species with ingredients. The formulations need to be screened for their chemical and clinical tests to prove their efficacy, which is being attempted in the laboratory.

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Table 1. Medico-botanical enumeration of crude drugs used against poisonous bites.

Sl.No	Botanical name/voucher number/locality.	Vernacular name	Family	Habit	Purpose	Part	Mode of preparation/Administration
1	<i>Achyranthes bidentata</i> Bl./29643/ Srisailum.		Amaranthaceae	Erect herb	Snake bite	R	Decoction given orally.
2	<i>Andrographis echioides</i> L./29623/ Diguvametta.		Acanthaceae	Procumbent herb	Snake bite	Wp	Pounded in mustard oil and paste applied on bitten region.
3	<i>Andrographis paniculata</i> (Burm.f.)Wall. ex. Nees./29618/Diguvametta.	Nelavemu	Acanthaceae	Erect herb	Snake bite	R	Paste applied on snake bitten regions.
4	<i>Chloroxylon sweitenia</i> DC./29607/Atmakur.	Billu/Billudu	Flindersiaceae	Tree	Scorpion sting	Sb	Ground in cow urine, made into paste, applied on the affected part.
5	<i>Cissampelos pariera</i> L./30037/Mahanandi.	Adavi Bankateega	Menispermaceae	Twiner	Snake bite	R	Dried, powered and given orally with water in 3 doses.
6	* <i>Coccinia grandis</i> L./30059/Chelama.	Donda	Cucurbitaceae	Tendrillar climber	Scorpion sting	L	Extract given orally and also paste as application externally.
7	<i>Derris scandens</i> (Roxb.) Benth.	Nallateega	Fabaceae	Liane	Snake bite	Sb	Extract given orally and the paste used for external application on bitten region.
8	<i>Dioscorea oppositifolia</i> L./29657/ Diguvametta.	Palasepu gadda	Dioscoreaceae	Climber	Scorpion sting	Rt	Ground made into paste, applied on bitten area.
9	* <i>Habenaria roxburghii</i> (Peers) R.Br.	Ratibadanica	Orchidaceae	Erect herb	Snake bite	Rt	Dried, mixed with pepper and Garlic , ground, infusion given orally.
10	<i>Helicteres isora</i> L. 30054/Diguvametta.	Gubatada	Sterculiaceae	Small tree	Snake bite	R	Extract given orally and paste applied externally.
11	<i>Heliotropium ovalifolium</i> Forssk./29678/Chelama.	Nugu danti.	Boraginaceae	Herb	Insect stings	L	Sap, applied on the affected regions.
12	<i>Holarrhena pubescens</i> (Buch-Ham.)/ 30057/Mahanandi.	Palakodisa/ Kodaga	Apocynaceae	Small tree	Snake bite	Sb	Decoction given orally.
13	<i>Holoptelea integrifolia</i> Roxb./29692/Chelama.	Tellatapasi	Ulmaceae	Tree	Scorpion sting	Inf.	Mede into paste and applied on bitten region.
14	<i>Ochna obtusata</i> var. <i>gamblei</i> (King ex Brandis)	Errvuddi	Ochnaceae	Tree	Snake bite	R	Infusion given orally / paste as application on the

	Kanis/30001/Srisailum.						bitten spot/ decoction given orally
15	* <i>Pavetta breviflora</i> DC./29667/Chelama.	Papidi	Rubiaceae	Shrub	Snake bite	Sb	Dried, ground, powder given orally with water in 3 doses.
16	<i>Sarcostemma intermedium</i> Decaisne/30021/Mahanandi.	Kondapaala /Pandirijamudu	Asclepiadaceae	Trailing shrub	Snake bite	S	Ground with latex and applied externally.
17	<i>Strychnos nux-vomica</i> L./29611/Chelama.	Musti	Loganiaceae	Tree	Snake bite	Rb	Along with that <i>Calotropis gigantea</i> , Zinger, powdered, given orally.
18	* <i>Tribulus terrestris</i> L./30052/Mahanandi.	Palleru	Zygophyllaceae	Spreading herb.	Scorpion sting	L	Extract given orally and paste as external application.
19	* <i>Viscum articulatum</i> Burm. f.var. <i>articulatum</i> Hook. f.; /30063/Chelama.	Badanica	Loranthaceae	Shrub	Snake bite	Ap	Extract given orally
20	<i>Wattakaka volubilis</i> (L.f.) Stap f. /29670/Gundlabramheswaram.	Kalisaku	Asclepiadaceae	Woody Liane	Snake bite	R	Extract given orally and the paste as application.

Ap: Aerial Parts; L: Leaf; Inf: Inflorescence; Rt: Root tuber; R: Root; S: Stem; Sb: Stem bark; Wp: whole plant.