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Traditional Medicine Used by the Adivasis of Eastern Ghats, Andhra Pradesh - For Bone Fractures

K. Venkata Ratnam and R.R. Venkata Raju

Department of Botany, Sri Krishnadevaraya University, Anantapur

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Abstract

The present survey provides information on the therapeutic properties of 21 crude drugs used for bone fractures by the natives of Eastern Ghats. Of the twenty one species that are presented here, fourteen had not been previously reported. Information on botanical name, vernacular name, family, part used, mode of drug preparation and administration is provided.

Introduction

The Eastern Ghats are a long chain of broken hills that pass mainly through three states viz., Orissa, Andhra Pradesh and Tamilnadu (Legris and Meher-Homji, 1982). They run about 1750 km with an average width of about 100 km between Mahanadi and Vaigai rivers along the Indian east coast. In Andhra Pradesh they situated between $12^{\circ} 38' - 22^{\circ}N$ latitudes and $78^{\circ} 50' - 84^{\circ} 46' E$ longitudes. The altitudes range from 300 – 1000m above MSL and the vegetation varies from semi-evergreen forests to scrub jungles. Tribes like Koyas, Kondareddis, Valmikis, Chenchus, Lambadas, Jatapus, Savaras, Bagatas, Porjas, Khonds, Yanadis and Yerukalas inhabit the forests of Eastern Ghats.

Our review of the literature revealed several reports on ethnobotanical studies. The majority of the reports dealt with general ailments like rheumatism (Hemadri, 1981), skin diseases (Jeevan, 2001), birth control (Lakshmi, 2001) and common women ailments (Venkata Ratnam and Venkata Raju, 2005). Few papers concerned the subject of traditional medicines for bone fractures (Rao & Reddy, 1999). Hence, the present report gains importance to reveal potential and hitherto unknown crude drugs along with their therapeutic properties.

Methodology

Exploration trips were carried out as a part of a series of ethno botanical studies that were carried out during 2002 to 2006 in order to collect first hand information from traditional practitioners. The collected information was recorded in field note books. Medicinal plants shown by the tribal healers were collected from the field and voucher herbarium specimens were prepared and deposited in SKU herbarium (SKU) Anantapur. The collected information was cross checked with the information from neighboring herbalists and also with available literature. The specimens were identified with the help of local/regional floras and confirmed by comparing with authentic specimens housed at S.K.University Herbarium (SKU) Anantapur, Madras Herbarium (MH) Coimbatore and Central National Herbarium (CAL) Kolkata.

Results & Discussion

The drug yielding plants were arranged in alphabetical order followed by botanical name, local name, family, part used and mode of drug administration (Table 1).

Our taxonomic analysis of crude drugs yielded 21 species belonging to 17 families used for bone fractures. Among them seven species viz; *Lannea coromandelica*, *Ichnocarpus frutescens*, *Vanda tessellate*, *Sterculia urens*, *Pouzolzia zeylanica*, *Gmelina arborea* had been previously reported for bone fractures (Jain,1991; Kirtikar and Basu, 1935; Rama Rao and Henry, 1996). Information on the remaining fourteen crude drugs was not found in the literature. Nearly half of the drugs were used in their natural form, while the remaining ones were mixed with such other ingredients as egg albumen, calcium, turmeric and pulse seeds.

Table 1: Systematic enumeration of crude drugs for bone fractures.

Botanical name	Family	Local name	Part used	Mode of administration
<i>Alangium salvifolium</i> (L.f.) Wangerin	Alangiaceae	Ooduga	L	Along with white layer of egg, calcium and turmeric ground and the mixture applied on fracture and bandaged with cloth
<i>Caesalpinia bonduc</i> L.	Caesalpiniaceae	Gaccha	L	Ground, made into paste and applied externally
<i>Canthium dicoccum</i> (Gaertn.) Teijsm	Rubiaceae	Korivi	Sb	Crushed, made into paste and applied as poultice
<i>Cassia fistula</i> L.	Caesalpiniaceae	Rela	L/Sb	Mixture of stem bark scrapping and leaf sap as poultice
<i>Cassia occidentalis</i> L.	Caesalpiniaceae	Kasintha	L	Paste applied over the fracture region and applied a cloth

				bondage of calcium and turmeric
<i>Dioscorea bulbifera</i> L.	Dioscoreaceae	Paralagaddalu	Rtu	Crushed, made into paste and applied as poultice
<i>Diospyros melanoxydon</i> Roxb.	Ebenaceae	Tunki	Sb	Extract mixed with white layer of egg and calcium applied externally and bandaged
<i>Dodonaea viscosa</i> (L.) Jacq.	Sapindaceae	Bandaru	L	Ground with white layer of egg, turmeric and calcium and bandaged
<i>Euphorbia antiquarum</i> L.	Euphorbiaceae	Bontajemudu	St	Made into paste and applied as poultice
<i>Euphorbia tirucalli</i> L.	Euphorbiaceae	Kalli	Sb	Crushed, paste applied as poultice
<i>Gmelina arborea</i> Roxb.	Verbenaceae	Gummudu	Sb	Crushed, paste applied as poultice
<i>Hibiscus panduriformis</i> Burm.f.	Malvaceae	-	L	Ground with white layer of country egg, turmeric and calcium and bandaged
<i>Ichnocarpus frutescens</i> (L.) Ait.	Apocynaceae	Palateega	Sh	Ground, made into paste and applied externally
<i>Lanea coromandelica</i> (Houtt.) Merr.	Anacardiaceae	Gumpena	Fr	Ground, paste applied externally
<i>Phyllanthus reticulatus</i> Poir.	Euphorbiaceae	Nallapuli	L	Along with seeds of <i>Vigna mungo</i> , <i>Trigonella foenum graecum</i> , white layer of egg, calcium and turmeric ground, mixture applied externally and bandaged
<i>Peristrophe paniculata</i> (Forssk.) Brumit	Acanthaceae	-	Sh	Along with white layer of egg, calcium and turmeric ground and the mixture applied on fracture and bandaged with cloth
<i>Polyalthia cerasoides</i> (Roxb.) Bedd.	Annonaceae	Naramamidi	Sb	Along with calcium and turmeric ground made into paste and mixture applied on fracture and bandaged with cloth
<i>Pouzolzia zeylanica</i> (L.) Benn.	Urticaceae	-	Sh	Crushed, paste applied as poultice
<i>Sterculia urens</i> Roxb.	Sterculiaceae	Tapsi	Rb	Crushed, paste applied as poultice
<i>Tamilnadia uliginosa</i> (Retz.) Tirveng.	Barringtoniaceae	Adavijama	Sb	Ground with white layer of country egg, turmeric and calcium and bandaged
<i>Vanda tessellata</i> (Roxb.) Don	Orchidaceae	Badanica	Sh	Crushed, paste applied as poultice

L: leaf; St: Stem; Sh: Shoot; Sb: Stem bark; Rb: Root bark; Rtu: Root tuber; Fr: Fruit

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