

Ethnomedicine For Cuts And Wounds By The Tribes Of Visakhapatnam District, Andhra Pradesh, India

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Abstract—The tribes of Visakhapatnam district have centuries old traditional knowledge to provide effective plant remedies against cuts and wounds. The present ethnomedicinal survey has revealed the use of 26 plant species belonging to 26 genera and 17 families by the traditional healers for curing cuts and wounds. Information collected from healers on local name, plant parts used and mode of application are enumerated and documented.

Keywords— Cuts and wounds, Ethnomedicine, Eastern ghats, Visakhapatnam, Andhra Pradesh, India

I. INTRODUCTION

Tribal people have to venture out in forest areas for gathering forest produce, edibles and involve usage of sharp edged weapons for hunting, various traditional implements in their daily life and for podu or shifting cultivation. They get hurt frequently because of accidental fall from trees, moving on uneven terrain with head loads, usage of weapons and implements and attack by wild animals. As there are no immediate medical facilities available in the remote forest habitations coupled with the absence of roads or timely transportation, they largely depend on natural plant resources and local tribal healers. A cut is a break or opening near the surface of the skin, or deeper and can affect muscles, or bone. Wound is an injury to tissue caused by a cut or puncture(open type) or by blunt force(closed type). Herbal medicinal preparations contain very effective antimicrobial and antiseptic active compounds and have wound healing as well as regenerative properties.

II. STUDY AREA

Visakhapatnam district is located in the North Eastern part of Andhra Pradesh. It lies between $17^{\circ}12'$ to $18^{\circ}33'$ N latitudes and $82^{\circ}18'$ to $83^{\circ}22'$ E longitudes, sharing borders with Chhattisgarh and Odisha in Northwest, Vizianagaram district in North, Bay of Bengal in the East and South and East Godavari district in the Southwest. Eastern ghats are located in the district having several peaks between 1300m to 1670m with annual rainfall 100-200cm, mean

maximum temperature 37.8°C and mean minimum temp 10°C .

Visakhapatnam district has a total area of 11,161 Km^2 out of which 5904 Km^2 occupied by forests constituting 52.9%. It is the largest tribal district in the state with tribal population of 6,18,500 as per 2011 census constituting 22.57% of the total tribal population in the state. The predominant tribes include Konda dora, Bagata, Kondh, Valmiki, Mukha dora and Porja.

III. MATERIALS AND METHODS

Present survey was carried out in all 11 tribal mandals of the Visakhapatnam agency area in all the seasons during 2014 to 2018. Field trips were made in order to gather information from the local experienced Vaidyas or healers through personal interviews on the usage of medicinal plants for the treatment of cuts and wounds. The data obtained on various aspects as local names, plant parts used, detailed method of crude drug preparation, dosage and mode of administration were carefully recorded and analysed. The medicinal plants used by the practitioners for cuts, wounds and both were collected from the fields and identified using the Flora of the Presidency of Madras (Gamble, 1915-1935) and Flora of Visakhapatnam district (Kumari and Rao, 2008). The collected voucher specimens were deposited in the herbarium of Department of Botany, Andhra University, Visakhapatnam.

IV. ENUMERATION

The medicinal plant species used are arranged in alphabetical order with botanical name followed by family, vernacular name, English name, voucher specimen number and location along with method of treatment.

Acacia chundra (Rottler) Willd. Mimosaceae VN: Kachu E: Red Ebony 16224 Paderu
Cuts and Wounds: Gum secreted by stem bark is applied over the affected areas to arrest bleeding and for healing.

Achyranthes aspera L. Amaranthaceae VN: Uttareni E: Prickly chaff 16034 Chilakala mamidi

Wounds: Leaf paste is applied over wounds caused by spines thrice a day till cure.

Ageratum conyzoides (L.) L. Asteraceae VN:

Pumpallu E: Goat weed 16225 Chintapalli

Cuts and Wounds: Leaves are ground and the juice filtered is applied over the affected areas thrice a day till cure.

Aloe vera (L.) Burm.f. Liliaceae VN: Kalabanda E: Indian aloe 16034 G.Madugula

Wounds: Fresh leaves are crushed and the paste is applied over the affected areas thrice a day till cure.

Argemone mexicana L. Papaveraceae VN:

Balurakkisa E: Mexican poppy 16002 Sankada

Wounds: Fresh leaf paste is applied over the affected areas twice a day till cure.

Argyreia nervosa (Burm. f.) Bojer Convolvulaceae VN: Samudrapala E: Elephant creeper 16012 Ganjigedda

Wounds: Tender shoots are ground and the paste is applied over the affected areas twice a day till cure.

Bambusa bambos (L.) Voss Poaceae VN: Veduru E: Bamboo 16173 Chintapalli

Cuts and Wounds: Greenish outer surface peelings are ground and the paste is applied over the affected areas of the skin twice a day till cure.

Bauhinia vahlii Wight & Arn. Caesalpiniaceae VN: Addaku E: Camels foot climber 16041 G. Madugula

Cuts and Wounds: Bark and leaves are crushed and the juice is applied over the affected areas thrice a day till cure.

Calotropis gigantea (L.) Dryand. Asclepiadaceae VN: Tella Jilledu E: Gigantic swallow wort 16004 Chintapalli

Wounds: Latex is applied on wounds caused by spines and to remove spines from wounds.

Cleome viscosa L. Cleomaceae VN: Kukka vaminta E: Wild mustard 16156 Mullumetta

Wounds: Fresh leaf paste is applied over the affected areas twice a day till cure.

Curcuma longa L. Zingiberaceae VN: Pasupu E: Turmeric 16090 Pasala

Wounds: Fresh rhizome paste is applied over the affected areas twice a day till cure.

Cynodon dactylon (L.) Pers. Poaceae VN: Garika E: Bahama grass 16180 Chintapalli

Cuts and Wounds: Fresh plant paste is applied to stop bleeding and twice a day till cure.

Cyperus rotundus L. Cyperaceae VN: Tunga E: Nut grass 16056 Ebulam

Cuts and Wounds: Rhizome paste is applied over the affected areas twice a day till cure.

Eclipta prostrata (L.) L. Asteraceae VN: Gunta kalagara E: Trailing Eclipta 16105 Pedavalasa

Cuts and Wounds: Fresh leaf paste is applied over the affected areas twice a day till cure.

Heliotropium indicum L. Boraginaceae VN: Nagadanti E: Indiana Turnsole 16073 Chintapalli

Cuts and Wounds: Fresh leaf paste is applied over the affected areas twice a day till cure.

Hibiscus sabdariffa L. Malvaceae VN: Erra gongura E: Sour spinach 16182 Ebulam

Cuts and Wounds: Fresh leaves are ground and the juice filtered is applied over affected areas thrice a day till cure.

Lannea coromandelica (Houtt.) Merr.

Anacardiaceae VN: Gumpena E: Indian ash tree 16133 G.Madugula

Cuts and Wounds: Stem bark paste is applied over the affected areas twice a day till cure.

Lantana camara L. Verbanaceae VN: Gabbu seeki E: Wild sage 16131 Choudupalli

Wounds: Paste made from tender leaves is applied over the affected areas twice a day till cure.

Mangifera indica L. Anacardiaceae VN: Mamidi E: Mango 16116 Choudupalli

Wounds: Leaf paste is applied over the affected areas twice a day till cure.

Mimosa pudica L. Mimosaceae VN: Kunukurodda E: Touch-me-not 16022 Chintapalli

Cuts and Wounds: Leaves are ground and juice extracted is applied over the affected areas thrice a day till cure.

Ricinus communis L. Euphorbiaceae VN: Amudam E: Castor oil 16093 Choudapalli

Wounds: Root paste is applied over the affected areas twice a day till cure.

Semecarpus anacardium L. Anacardiaceae VN: Nalla jeedi E: Marking nut 16009 Pasala

Cuts and Wounds: Dried stem bark is ground and powder is applied with coconut oil over the affected areas till cure.

Sesamum indicum L. Pedaliaceae VN: Nuvvulu E: Gingelly 16151 G.Madugula

Cuts and Wounds: Leaf juice is applied over the affected areas thrice a day till cure.

Stachytarpheta jamaicensis (L.) Vahl Verbenaceae VN: Edduru uttaren E: Aarons rod 6223 G.Madugula

Wounds: Leaf paste is applied over the affected areas twice a day till cure.

Tridax procumbens (L.) L. Asteraceae VN: Gaddi chamanti E: Coat button 16096 Ebulam

Cuts and Wounds: Leaves along with those of *Achyranthus aspera* are ground and the paste is applied over the affected areas till cure.

Urena lobata L. Malvaceae VN: Nalla benda E: Aramina 16188 Ebulam

Wounds: Root paste is applied with neem oil over the affected areas twice a day till cure.

RESULTS AND DISCUSSION

The present ethnomedicinal survey describes usage of 26 plant species belong to 17 families by the tribes of Visakhapatnam district, Andhra Pradesh to treat cuts and wounds. Among all, 17 species are herbs (65%), 4 species are trees (15%), 3 species are shrubs (11%) and 2 species are climbers (0.7%) were recorded. The plant parts most predominantly used in the medicinal preparation were leaves in 15 practices (56%) followed by bark in 3 practices (11%). Rhizome and roots in 2 practices each (7%), whole plant, stem, tender shoots, latex and gum in 1 practice each (3%). These plants belong to 17 families of which

Amaranthaceae with 4 species followed by Asteraceae (3 species), Malvaceae, Mimosaceae, Verbenaceae, Poaceae (2 species each) and remaining are with 1 species each. Of the total 26 medicinal plants, 13 plants are found to be useful for curing wounds and the remaining 13 for both cuts and wounds. Fresh paste of the useful plant parts predominate the mode of preparation in the treatment of cuts and wounds from 18 plants (69%) followed by fresh juice from 5 plants (19 %).

Plants used for similar purpose by different tribes in various parts of the country and its neighbors are *Aloe vera*, *Curcuma longa*, *Cyperus rotundus*, *Lantana camara*, *Ricinus communis* by tribes of Bidar district, Karnataka (Kumar and Vidyasagar, 2008); *Achyranthes aspera*, *Aloe vera*, *Argemone mexicana*, *Calotropis gigantea*, *Curcuma longa*, *Cynodon dactylon*, *Lantana camara* by the Malayali tribes in Vittal hills, Dharmapuri of Tamilnadu (Ramya et al., 2009); *Achyranthes aspera*, *Cynodon dactylon*, *Mimosa pudica*, *Ricinus communis* by tribal and rural people of Karnataka (Shiddamallayya, 2010); *Heliotropium indicum*, *Lannea coromandelica* by Chakma, Marma tribes of Chittagong Hill tracts, Bangladesh (Biswas et al., 2010); *Cleome viscosa*, *Mangifera indica* by Kokani tribe of Nasik district of Maharashtra (Kuvar and Bapat, 2010); *Eclipta prostrata*, *Tridax procumbens* by Gond, Kol, Barga, Panica, Khairwar, Manjhi, Mawasi, Agaria tribes of Rewa district Madhya Pradesh (Shukla et al., 2010); *Semecarpus anacardium*, *Tridax procumbens* by Gond tribe of Bhandara district, Maharashtra (Gupta et al., 2010); *Ricinus communis*, *Tridax procumbens* by Santhal, Kolha, Bathudi, Kharias, Mankidias, Gond, Ho tribes of Mayurbhanj district, Orissa (Rout and Panda, 2010); *Achyranthes aspera*, *Argyreia nervosa* by Korku, Gond, Bhils, Bhilalas, Naik, Mankar, Nihal tribes of East Nimar region, Madhya Pradesh (Ray et al., 2011); *Ageratum conyzoides*, *Cynodon dactylon*, *Hibiscus sabdariffa*, *Lannea coromandelica*, *Ricinus communis*, *Tridax procumbens* by Gujjar tribe of sub-Himalayan tract, Uttarakhand (Sharma et al., 2013); *Aloe vera*, *Argemone mexicana*, *Cleome viscosa*, *Cynodon dactylon*, *Mangifera indica*, *Mimosa pudica*, *Sesamum orientale*, *Tridax procumbens* by the Kuruma tribes, Wayanad district of Kerala (Thomas, 2014); *Ageratum conyzoides*, *Cynodon dactylon* by the tribes of Morni Hills, Shivalik Range, Panchkula, Haryana (Balkrishna et al., 2018).

Though cuts and wounds are common in the daily life of tribal people yet none of them become septic and heals fast without any complications. The immediate treatment offered by the traditional healers is very effective and inexpensive with the easily available local medicinal plants to the poor tribal people.

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