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Research Article

A study on folklore compound used for haemostatic and wound healing effect by the bodo-community of Assam, India

Dr. Khagen Basumatary[1], Dr. Verity Markhap[2]*

[1]Prof. & Head, P.G. Dept Samhita Siddhanta, Govt. Ayurvedic College and Hospital, Guwahati- 781014, Assam, India
[2]P.G.T, P.G. Dept Samhita Siddhanta, Govt. Ayurvedic College and Hospital, Guwahati- 781014, Assam, India

***Corresponding Author**
Dr. Verity Markhap

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Abstract: Bodo tribe, the largest plains tribes of Assam, northeastern part of India possesses an immense knowledge and belief on their folklore medicinal practices. They inhibit their art of healing from their forefather, and it is being passed on since ages. Multiple herbs are utilize in combination for a specific desired effect. One such popular compound comprising of 6 herbs is very well known among the community for its haemostatic and quick wound healing effect. The compound consist of Jatrasi *(Justicia gendarussa),* Dubri hagra *(Cynodon dactylon),* Two varieties of Manimuni *(Centella asiatica and Hydrocotyle rotundifolia),* Jarmuni *(Chromolaena Odorata),* Thulungshi/*Tulsi (Ocimum sanctum*). A clear identification and detail analysis each individual herbs would aid in better understanding of the combined haemostatic and wound healing effect.

Keywords: Traditional use of herbs, Bodo community, Haemostatic, Wound healing, A folklore compound of six herbs.

INTRODUCTION

India considred a goldmine for medicinal plants have always been known for its glorious tradition of the science of healing. Ayurveda, the organized system of medicine emerged around 6000(BCE) [1] from India is reported to have over 20,000 plant drug formulation listed in Ayurvedic pharmacopeia. In addition nearly 60,000 are believed to be in existing in the folk practices and tribal knowledge [2]. There are over 53millions tribal people in India belonging to 550 communities of 227 ethnic groups. They inhabit about 5,000 forested villages or lead a nomadic life in the forest [3]. Each community having its own social and cultural identity. In Assam, the tribal communities are nearby 18 in number, encompassing both plains and hills, out of which Bodo tribe is the largest and plains tribe of Assam [4]. This ethno linguistic group highly intact to their rich culture and tradition from ages possess an immense knowledge and belief on their folklore medicinal practices. The medicine are combined and effectively utilizes as a formulation against a specified disease or symptoms. One such compound comprising of six drugs have been recognized for its haemostatic and wound healing effect.

MATERIAL AND METHODS

Field survey in Kokrajhar, Udalguri, Baksa and Chirang district of Assam, India was conducted by consulting with the experienced elderly people of those district and information regarding the traditional use of the specific compound containing the six herbs is retrieved. The information gathered is re-evaluate and compared with other established system of herbal medicine like Ayurveda and data of recent updates published in various scientific articles.

DISCUSSION

This folklore compound have been effectively utilized since ages for haemostatic and wound healing effect. Eventhough the individual herbs are being practiced by other community and systems of medicine for their specific indication, the combined effect of these six herbs aims mainly at bringing haemostatic and wound healing against cuts wounds and other bleeding disorders. Inspite of the deprivation of appropriate pharmacological evidence regarding the haemostatic and wound healing effect of the individual herb, there is an acceptance for the same effect when brought in combination. This is established as a proven remedy based on the repeated practice and its desirous effect witnessed by the tribe.

Table-1: The individual use of the six herbs of the folklore compound utilised by the Bodo community

Sl. No	Local names	Botanical Name	Cultural Use	Medicinal Use	
1.	Jatrasi	*Justicia gendarussa*	The twig of leaves is used in holy water(dwi santi) during worship	The paste of the leaves is used to stop bleeding in cut injury and for wound healing.	These six herbs are being used traditionally since time immemorial for the haemostatic and wound healing effects.
2.	Dubri hagra	*Cynodon dactylon*	The twig of leaves is used in holy water(dwi santi) during worship	The whole plant is made into paste and used to arrest bleeding in cut injury.	
3.	Manimuni geder	*Centella asiatica*	Used as a nutrient vegetable	The whole plant is mashed by hand and rubbed over the skin in urticaria. Paste is also mixed with kerosene and applied over the skin in urticaria. Paste also used for wound healing effect.	
4.	Manimuni physa	*Hydrocotyle rotunfolia*	Used as a nutrient vegetable		
5.	Jarmuni	*Chromolaena odorata*	--	The paste of the leaves is used to stop bleeding in cut injury and for wound healing.	
6.	Tulsi/ Thulungshi	*Ocimum sanctum*	The twig of leaves is used in holy water(dwi santi) during worship	The paste of the leaves is used to stop bleeding in cut injury and for wound healing.	

***Centella asiatica* (Manimuni geder)**

***Justicia gendarussa* (Jatrasi)**

***Cynodon dactylon* (Dubri hagra)**

***Hydrocotyle rotunfolia* (Manimuni physa)**

***Ocimum sanctum* (Tulsi/ Thulungshi)**

***Chromolaena odorata* (Jarmuni)**

Table-2: Showing the individual use of the herbs in different tradition with recent updates

Sl. No	Botanical name	Vernacular name	Family	Chemical composition	Used as per Ayurveda	Recent updates
1.	*Justicia gendarussa*	Willow-leaved Justicia	Acanthaceae	Flavonoids, Alkoloids, Saponin, Terpenoids	Known as gandharasa, Kasanah. Beneficial for respiratory disorders.	Leaf juice used as an antiseptic and haemostatic. Applied externally on cuts and wounds, used for gargle in mouth ulcers [5]. Animal study on rat have also showed significant anti-arthritic activity.
2.	*Cynodon dactylon*	Bermuda grass	Graminae	Phenolic, Phyto-toxin, p-coumaric, p-hydroxy benzoic	Known as Durva. Its paste used to control bledding in fresh wounds and ulcer, used as eyedrop in conjunctivitis, nasal drop in epistaxis, its decoction administered in bleeding oiles or blood mixed diarrhea, UTI or skin disorders.	The plant has been long used in the ailments such as anasarca, cancer, convulsion, cough, cramps, diarrhea, dropsy, dysentery, epilepsy, headache, hemorrhage, hypertension, snakebite, stones, tumors and wounds. The plants shows antiviral and antimicrobial properties.
3.	*Centella asiatica*	Cetella / Gotukola	Apiaceae	Brahmoside, Thankuniside, Alkaloids, Vellarin, Asiaticoside	Known as Mandukaparni It is administered in cough, fever, itchy rashes, diabetes, breathing disorders, anaemia, blood related disorders [7].	Consumed as a vegetable, chutney or salad by many community. It is an intellect promoting herb known for its neuroprotective properties, enhancing memory and cognitive function. It increases secretion of glycoprotein, gastric mucin in the stomach preventing damage to gastric mucosa The chemical components are said to have analgesic, angiogenic, anticonvulsant, antidepressant, anit-inflammatory, antipyretic, antitumor, antiulcer, diuretic, sedative, nervine tonic
4.	*Hydrocotyle rotunfolia*					

						properties [8].
5.	*Chromolaena odorata*	Siam weed	Astaraceae	Alkaloids, Cyanogenic glycocides, Flavonoids, Phylates, Saponins, tannins	Known as tivra gandha.	Used by other community and system for controlling bleeding in cut and for wound healing effect. It has hyperlipidemia, hypoglycemic, Anti-inflammatory, Analgesic, anti-pyretic, Antimicrobial, Immune-modulation properties [9].
6.	*Ocimum sanctum*	Holy Basil	Lamiaceae	Oleanotic acid, Ursolic acid, Rasmorinic acid, Eugenol, Linalool	Known as Tulsi It is antimicrobia, anti-viral, anti-inflammator, immune-modulator, relieves anorexia, acts as cardiac tonic, Useful in respiratory disorders, skin diseases, eye disorders [10].	It is recommended for the treatment of Bronchitis, Malaria, Diarrhoea, Dysentery, Skin diseases, Arthritis, Eye diseases, insect bites. It is suggested to possess Anti-diabetic, Antifungal, Antimicrobial, Cardioprotectiv, Analgesic, Antispasmodic, Adaptogenic actions.

CONCLUSION

This haemostatic folklore compound highly practiced by the Bodo tribe studied individually possess multipurpose pharmacological actions like anti-inflammatory, analgesic, anti-microbial, antispasmodic properties. These properties altogether highlight the wound healing and haemostatic effect of the compound. This compound is effectively practiced traditionally since time immemorial for the haemostatic and wound healing effect by the Bodo community. This can set a new platform for the researcher and pharmaceutical sciences. The active components present in these herbs when brought into combination can be developed for designing a haemostatic and wound healing drug or formulation with minimal adverse effect.

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