



Research Paper

PLANTS USED BY KOKNI TRIBE AS ANTIDOTE FOR SNAKE BITE AND SCORPION STING FROM NASIK AND DHULE DISTRICTS OF MAHARASHTRA

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Abstract

Snake-bite and Scorpion sting are an important medical emergency in many parts of the Country. It results in the death or chronic disability of many active younger people, especially those involved in agriculture and forestry. There is little documentation of the ethnomedicinal knowledge was carried out in the districts on Kokni tribal. In addition, several wild medicinal plants are declining in number due to the destruction and unscientific collection of plants from forests. Hence there is an urgent need for exploration and documentation of the traditional knowledge in order to ascertain the local ethnomedicinal plants. Therefore the present study is an attempt to present ethnomedicinal observations recorded with respect to snake bites and scorpion sting. The present data reveals 57 plant species belonging to 34 families used by Kokni tribal as an antidote for snakebite and scorpion sting.

Key words: Kokni, Ethnomedicine, Snakebite, Scorpion sting, Antidote.

INTRODUCTION

Snakebite is a common acute medical emergency faced by the tribal and rural population in tropical and subtropical countries with heavy rainfall and climate. Conservative sources estimate that number of snakebite incidents reached globally by one million. In India alone, more than two lakh snakebite cases are reported. Antiserum is the only therapeutic agent available throughout the world. Traditional healers use a wide range of plants to treat many ailments including snakebites. Folk herbal snakebite remedies are of interest since they may have recognizable therapeutic or toxic effect. [1]

The snake bite and scorpion sting is neglected health hazard worldwide. Most snakebite of the more than 3000 species of snakes are considered dangerous to humans. In India, particularly in the rural areas snake bite victims turn to traditional medicine

men and healers, due to lack of availability of antiserum. Medicinal plants are a rich source of many natural inhibitors and pharmacologically active compounds and plants application against snake bite is known. Among such diseases, snake and scorpion bites are also treated by using medicinal plants the studies on herbal antidotes against snake and scorpion venom are of great importance in the management of snake bite disorders. [2]

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 *Materia Medica* and occult-mystical nature of their practice. Local knowledge on ethnomedicine is revolutionary way to recast our conventional knowledge. [3]

MATERIALS AND METHODS

In the present study periodic field trips were carried out in different tribal villages of Nasik and Dhule district of Maharashtra during 2015 to 2018. Data was collected from the tribal through personal communication and questionnaire. The plants used to cure snake bite and scorpion sting were collected from the field, pressed, dried and mounted on the herbarium sheets. The plants were identified using *Flora of Maharashtra* and compared with the specimens in *Blatter Herbarium*, St. Xavier's College, Mumbai. [4-7]

RESULTS

Acacia pennata (L.) Willd. (Mimosaceae)

Local name: Shenara

Uses: Bark is crushed and extract is used as antidote for snake bite.

Achyranthes aspera L. (Amaranthaceae)

Local name: Sonaru

Uses: Approximately 1 gm. fresh root is crushed and administered orally twice a day as antidote for snake bite. Roots are chewed for scorpion sting.

Ailanthus excelsa Roxb. (Simaroubaceae)

Local name: Maharukh

Uses: Stem is crushed and extract is administered through nose as an antidote against snake bite.

Albizia lebbek (L.) Benth. (Mimosaceae)

Local name: Shirish

Uses: Leaves are crushed and paste is applied externally against scorpion sting.

Albizia procera (Roxb.) Benth. (Mimosaceae)

Local name: Dandashi

Uses: Bark is crushed and extract is used as antidote for snake bite.

Anacardium occidentale L. (Anacardiaceae)

Local name: Kaju

Uses: Seeds are rubbed on stone and paste is applied on place of scorpion sting.

Anogeissus latifolia (Roxb. ex DC.) Wall. ex Bedd. (Combretaceae)

Local name: Dhavda

Uses: Bark is crushed in water and extract is used as antidote against snake bite.

Arisaema tortuosum (Wall.) Schott (Araceae)

Local name: Sardacha Jhad

Uses: The corms are boiled in water and decoction is used as antidote against snake bite.

Bauhinia racemosa Lam. (Caesalpiniaceae)

Local name: Apta

Uses: Paste of bark is applied against scorpion sting.

Boerhavia chinensis (L.) Rottb. (Nyctaginaceae)

Local name: Dagadfodya

Uses: Root is crushed in water and extract is used as antidote for snake bite.

Boswellia serrata Roxb. (Burseraceae)

Local name: Dupali

Uses: Leaves and root are crushed together and paste is applied on the place of scorpion sting.

Caesalpinia bonduc (L.) Roxb. (Caesalpiniaceae)

Local name: Sagargota

Uses: Seed are crushed and extract is used as antidote for snake bite. Seeds are rubbed on stone and slurry is applied against scorpion sting.

Calotropis gigantea (L.) R. Br. (Asclepiadaceae)

Local name: Rui

Uses: Leaves are crushed and extract is dropped in nostrils as antidote for snake bite. Root paste is applied externally against scorpion sting.

Calycopteris floribunda (Roxb.) Poir. (Combretaceae)

Local name: Dandburad

Uses: Root is crushed and extract is given orally as antidote for snakebite.

Cassine glauca (Rottb.) Kuntze. (Celastraceae)

Local name: Bhutyapalas

Uses: Stem is crushed in water and extract is used as antidote for snake bite.

Celastrus paniculatus Willd. (Celastraceae)

Local name: Kadkangan

Uses: The stem bark powder is mixed with water and administered orally as an antidote for snake bite. Seeds are crushed and paste is applied on the place snake bite and scorpion sting.

Celosia argentea L. (Amaranthaceae)

Local name: Kurdu

Uses: Roots are crushed in water and extract is used as antidote for snake bite.

Citrullus lanatus (Thunb.) Mats & Nakai. (Cucurbitaceae)

Local name: Kalingad

Uses: Powder of dry seeds is applied externally on the place of scorpion sting.

Corallocarpus epigaeus (Rottler) Hook.f. (Cucurbitaceae)

Local name: Mirchikand

Uses: Tuber is crushed and extract is used as antidote for snake bite.

Coix aquatica Roxb. (Poaceae)

Local name: Kachura

Uses: Roots are crushed in water and extract is used as antidote for snake bite.

Corchorus capsularis L. (Tiliaceae)

Local name: Ranchucha

Uses: Seed powder is used as antidote for snakebite, after 5 minutes interval pinch of powder is given to the victim.

Cucurbita maxima Duchesne (Cucurbitaceae)

Local name: Bhopala

Uses: Stem is crushed and paste is applied on the place of scorpion sting.

Cyclea peltata (Lam.) Hook.f. & Thomson (Menispermaceae)

Local name: Tanni

Uses: Root is crushed and juice is given to the victim of snake bite thrice a day.

Cyperus rotundus L. (Cyperaceae)

Local name: Lavhalu

Uses: Tubers and leaves are crushed together and extract is administered orally as antidote for water snake bite. Leaves are also chewed directly.

Cyphostemma auriculatum (Roxb.) P.Singh & B.V.Shetty (Vitaceae)

Local name: Tedip

Uses: Root is crushed in water and extract is used as antidote for snake bite.

Dalbergia lanceolaria L. f. (Papilionaceae)

Local name: Dandus

Uses: Stem is crushed and paste is applied on the place of scorpion sting to reduce inflammation.

Delonix regia (Boj. ex Hook.) Rafin. (Caesalpiniaceae)

Local name: Gul-Mohur

Uses: Seeds are rubbed on stone and slurry is applied on the place of scorpion sting.

Desmodium gangeticum (L.) DC. (Papilionaceae)

Local name: Asud

Uses: Root extract is used as antidote for snake bite.

Diplocyclos palmatus (L.) C. Jeffrey (Cucurbitaceae)

Local name: Mahadevpind

Uses: Fruits are crushed and juice extracted from fruits is given for 2 times a day as antidote for snakebite.

Erythrina variegata L. (Papilionaceae)

Local name: Pangara

Uses: Bark and leaves are crushed together and extract is used as antidote for snake bite.

Gloriosa superba L. (Liliaceae)

Local name: Kal-lavi

Uses: Tuber is crushed and paste is applied on the place of snakebite and scorpion sting.

Haldina cordifolia (Roxb.) Ridsdale (Rubiaceae)

Local name: Haldawan

Uses: The bark is crushed and extracted juice is given to victim of snake bite as antidote.

Helicteres isora L. (Sterculiaceae)

Local name: Murudsheng

Uses: Root decoction is given orally as an antidote for snake bite.

Holarrhena pubescens Wall. (Apocynaceae)

Local name: KalaKuda

Uses: Bark is crushed and extract is used as antidote for snake bite.

Launaea procumbens (Roxb.) Ramayya & Rajagopal (Asteraceae)

Local name: Pathari

Uses: Roots are given to victim of snake bite to chew. After chewing the roots, the victim is taken to 'Bhagat' who cures the victim by saying 'Mantras'. The roots are used as antidote for snake bite.

Leea macrophylla Roxb. (Leeaceae)

Local name: Supad

Uses: Root is crushed and juice is used as antidote for snake bite.

Mangifera indica L. (Anacardiaceae)

Local name: Amba

Uses: The gum is applied on the place of Scorpion sting to reduce inflammation.

Melia azedarach L. (Meliaceae)

Local name: Nimbara

Uses: Bark is chewed as antidote for snake bite to reduce poison.

Mimosa hamata Willd. (Mimosaceae)

Local name: Arkathi

Uses: Bark is crushed and extract is used as antidote for snake bite.

Morinda pubescens Sm. (Rubiaceae)

Local name: Aal

Uses: Leaf juice is administered orally as antidote for snakebite.

Moringa concanensis Nimmo (Moringaceae)

Local name: Jungli-Shewga

Uses: Gum is applied on the place of scorpion sting.

Oroxylum indicum (L.) Vent (Bignoniaceae)

Local name: Tetu

Uses: Extract of bark is used as antidote against snakebite. *Piper betle* L. (Paan) and Calcium carbonate (Chuna) is prohibited for one month to the victim.

Oxalis corniculata L. (Oxalidaceae)

Local name: Ambada

Uses: Plant is crushed in water and extract is used as antidote for snakebite.

Phyllanthus emblica L. (Euphorbiaceae)

Local name: Awala

Uses: Bark is crushed in water and extract is given as antidote for snake bite.

Plumbago zeylanica L. (Plumbaginaceae)

Local name: Chitruk

Uses: The root is crushed with an old copper coin and the extract is used as an antidote for snake bite.

Radermachera xylocarpa (Roxb.) Roxb. ex K.Schum. (Bignoniaceae)

Local name: Khadsinghi

Uses: Bark is crushed and extract is used as antidote for snake bite.

Rotheca serrata (L.) Steane & Mabb. (Verbenaceae)

Local name: Bharangi

Uses: Leaf decoction is used as antidote for snake bite.

Rungia repens (L.) Nees (Acanthaceae)

Local name: Bavachi

Uses: Plant extract is used as antidote for snake bite and given to patient with 1 hour interval.

Senna tora (L.) Roxb. (Caesalpiniaceae)

Local name: Turtha

Uses: Leaves are crushed and paste is applied for scorpion sting and snake bite.

Tamarindus indica L. (Caesalpiniaceae)

Local name: Chinch

Uses: Seeds are rubbed on stone and paste is applied on scorpion sting. Leaves are crushed and paste is applied on scorpion sting.

Tephrosia purpurea (L.) Pers. (Papilionaceae)

Local name: Unhali

Uses: Roots are directly chewed as antidote for snake bite.

Tinospora cordifolia (Willd.) Miers. Dalz. & Gibs (Menispermaceae)

Local name: Ghamuli, Siri

Uses: Extract of plant is used as antidote against snake bite.

Trichosanthes tricuspidata Lour. (Cucurbitaceae)

Local name: Gavlan

Uses: Seeds are dried, crush to make powder and used as antidote for snake bite.

Triumfetta rhomboidea Jacq. (Tiliaceae)

Local name: Lal lepad

Uses: Bark is chewed twice a day as antidote for snakebite.

Ventilago denticulata Willd. (Rhamnaceae)

Local name: Arshishi

Uses: Root is crushed and extract is used as antidote against snake bite.

Woodfordia fruticosa (L.) Kurz. (Lythraceae)

Local name: Dhaiti

Uses: The leaves are crushed and extracted juice is used as antidote for snake bite.

Wrightia tinctoria R. Br. (Apocynaceae)

Local name: Dudhkudi

Uses: Leaf paste is applied externally for snake bite.

DISCUSSION

The present investigation reveals that the plants used to treat snake bite are commonly available in the local forests. The method of preparation and mode of action is also simple and convenient. Hence most of the people can afford the traditional treatment and having personal faith and believe gave encouraging results in the treatment of snake bites. [8]

The present paper give a detailed account of 57 plants as herbal remedies for snake bite and scorpion sting used by the Kokni tribe of Nasik and Dhule districts of Maharashtra.

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