OPEN ACCESS Freely available online

Global Journal of Biology, Agriculture and Health Sciences

Short Communication

Ethno-Medicinal Plant Species Used to Treat Snakebites (Antidote) of Vijayapur (Bijapur) District of Karnataka, India

Arati Laddimath*

Department of Botany, Karnataka State Akkamhadevi Women's University, Vijayapur, Karnataka, India

ABSTRACT

An ethno-medicinal plant species survey of Vijayapur district of Karnataka comprising 13 tehsil was conducted during March 2018 to November 2019. The purpose of this survey was to document the Ethno- medicinal plant species to treat snakebite. The present study was initiated with an aim to identify Ethno-medicinal plant species resources from traditional practitioners of Vijayapur district. There are about 13 species of angiosperms belonging to 13 genera and 12 families were found to be used treat snakebite.

Keywords: Ethno-medicinal plant species; Snakebite; Vijayapur; Karnataka

INTRODUCTION

Antidote means a remedy against poison. Snake bite is serious effect in rural community. Use of traditional medicines is generally preferred against snakebites rather than anti-venoms. Medicinal herbal constituents have immense global importance and are recognized as local heritage. Venom of the snake is most complex mixture containing enzymatic and non-enzymatic toxins, non-toxic proteins, also metals. This mixture is stored in the poison glands of snakes. Numerous enzymes are present in venom, some of which are haemorrhagins, cytolytic, necrotic toxins, pre-synaptic and post-synaptic neurotoxins, phospholipases, proteases, nucleosidases, phosphodiesterases. Snake Venom also contains non-protein anticonvulsant cardio toxin. People of rural area unable to reach city hospital as early as possible. Traditional herbal medicines are and easily available. Ethno medicine deal with traditional health care which encompasses the knowledge, skill and methods practices concerning healthcare. The present study was initiated with an aim to identify Ethno- medicinal plants resources from traditional practitioners of Vijayapur district to treat snakebite[1].

MATERIAL AND METHODS

Ethnobotanical data collection

Ethno- medicinal plants survey conducted on March 2018 to November 2019 in Vijayapur district. For this, frequent field trips were made to 30 villages belonging to all 13 tehsil was of the district. Thirty-two traditional practitioners (30 men and 2 women) Data and information recorded in the standard questionnaire. Prior Informed Consent (PIC)[2].

Voucher specimen collection and identification

Collected data and information include, Vernacular name of traditionally used medicinal plants, part used, method of preparation and dosage. Medicinal plant species were photographed in the field. Plant specimens were identified consulting with experts, by referring Flora of Gulbarga District (6), three volumes of the Flora of Presidency of Madras (1). The voucher specimens were stored at the herbarium centre, Department of post graduate studies and Research in Botany, Akkamahadevi Womens University,Vijayapur[3].

Data analysis

The collected data were organized and relative frequencies citation(RFC=FC/N) N is the total informant, FC is the Number of informants suggested same plant species for same medication is summarised in and percentage were calculated for different plant parts were used to snakebite treatment [4].

Corresponding author: Arati Laddimath, Department of Botany, Karnataka State Akkamhadevi Women's University, Vijayapur, Karnataka, India; Tel: 9448752200; E-mail: drarati2009@gmail.com

Received date: May 03, 2021; **Accepted date:** May 17, 2021; **Published date**: May 24, 2021

Citation: Laddimath A (2021) Ethno-Medicinal Plant Species Used to Treat Snakebites (Antidote) of Vijayapur (Bijapur) District of Karnataka, India. Glob J Biol Agric Health Sci. 10:112.

Study area

The Vijayapur district of Karnataka state is located between north latitude 16°.01', 17°.45', and east longitude 75°.03', 76°. 29'. The district has its border with Belgaum, Bagalkot, Raichur, Gulbarga district and to north, Sholapur district of Maharashtra state. Vijyapur district is plain Deccan plateau, which is from 365-610 mt height above sea level. This region is slope towards west to east. The river Doni, Krishna, Bheema [5].

Tributaries are flows according to the slope. The total area of Vijayapur district is 10,541 sq kms. There are thirteen talukas of Vijayapur district i.e., Vijayapur, Muddebihaal, Sindagi, Basavanbagevaadi, Indi, Talikote , Devara Hipparagi , Chadchan, Tikota , Babaleshwar , Kolhar , Nidagundi . Almel. Bordered by the Bheema River in the north and the River Krishna in the south [6]. The district consists of the dry and arid tract of the Deccan Plateau. The temperature varies between 42°C during summer and 15°C during winter season respectively. In May mean maximum temperature is 40°C. The climate of this region is arid, tropical and steppe type. The soil of Vijayapur district area is rich in content of basalt rock, magnetite, magnesium, aluminium and iron oxide. The Vijayapur district receives normal rainfall 578.0 mm and the vegetation of this region is mainly dry and deciduous and may broadly as vegetation on plains. The natural vegetation near Alamatti Dam area is like dry and hot having rich flora. Many local traditional practitioners collect the plants from this area to cure the diseases [7].

RESULT AND DISCUSSION

In the present account, 13 species of angiosperms belonging to 13 genera and 12 families were reported for snakebite treatment. The predominant family is Caesalpinaceae with 2 species. Data obtained from the survey is compiled. All plant species scientific name, family, local name, Habit, Part used and mode of administration are provided. Different plant parts were ued snakebite treatment. Among these leaves were used (38%), followed by root 15.3%), whole plant (15.3%), fruit (7.6%), seeds (7.6%), stem seeds (7.6%), stem (7.6%), flower (7.6%) decreasing order. Among the reported plant species for snakebite treatment Relative Frequency of Citation (RFC) has calculated, the most frequently cited species were Aristolochia indica (0.25), Tinospora cordifolia (0.12). Citrullus colosynthis (0.09), Albizia lebbeck, Andrographis paniculata, Bacopa monnieri, Caesalpinia bonducella, Senna tora, Vitex negundo (0.06). Remaining medicinal plant species were reported by less than two informants. In Karnataka, Ethno medicine practice for snakebite studies conducted in Chitradurga districts [8].

Aristolochia indica is most using species for snake bite However Ethno-veterinary medicine practice study in Vijayapur(Bijapur) district has been reported, but snakebite studies has not been done still. Most of the people dependent on traditional herbal medicine because availability of effective drug plants. Hence, these plants can be taken up for further pharmacological and clinical studies (Figure 1).

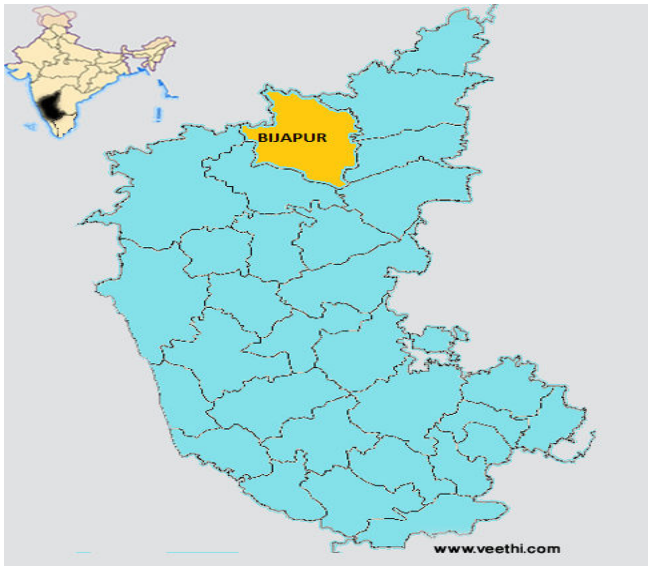

Figure 1: Map of the study area.

CONCLUSION

Ethno-medicinal plants survey conducted on March 2018 to November 2019 in Vijayapur district. The main purpose of this survey was to document the traditional use of medicinal plants for snakebite treatment in vijayapur district. 13 species belonging to 13 genera and 12 families were found to be used. The scientific name, family, local name, habit along with part used and mode of their administration are provided. This traditional knowledge can transfer from one generation to generation. The study also suggested that the present information on medicinal plant species used for snakebite treatment by the traditional practitioners of Vijayapur district may be used for phytochemical and pharmacological research in future for the development of new sources of drugs.

REFERENCES

1. Gamble JS, Fischer CEC. Flora of the Presidency of Madras. 1984.
2. Hiremath VT, Taranath TC. Traditional Phytotherapy for Snake bites by Tribes of Chitradurga District, Karnataka, India. Ethnobotanical Leaflets. 2010;14:120-125.
3. Laddimath Arati. Ethno-veterinary medicinal plant species of Vijayapur (Bijapur) district of Karnataka, India. Ind J Med Plants Stud. 2019;7(6):06-09.
4. Lakshmana, Sreenath KP. Phyto-antidotes of tumkur district, karnataka, india. Glob J Bio Agri Health Sci. 2014;3(4):122-130.
5. Saha A, Gomes A, Giri B, Biswas AK, Dasgupta SC. On occurrence of non-protein low mol. wt cardiotoxin in Indian King Cobra (Ophiophagus hannah); 1836, Venom. Indian j Exp Biol. 2006;44(4): 279-85.
6. Seetharam YN, Kotresha K, Uplaonkar SB. Flora of Gulbarga district Gulbarga University Gulbarga. 2000.
7. Sumedh M Vaidya, Amar R Singh, Vraj G Patel, Nilofar A Khan, Rupali P. A review on herbs against snake venom. J Pharm Phytochemistry. 2018;6:05-09
8. Laddimath A, Rao S. Ethno-medicinal plants used to treat some psychological (mental) disorders by traditional practitioners of Vijayapur (Bijapur) district of Karnataka, India. Int J Ethnobiology Ethnomedicine. 2016;3:1-7.