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Ethnobotanical Survey Of Medicinal Plants Used For Snake Bite In Chikmagaluru.

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Abstract: Plants have been used in Folklore medicine for thousands of years. The knowledge of medicinal plants has been gathered from different medicinal systems such as *Ayurveda, Unani* and *Sidhha*. In India it is reported that Folklore healers used 2500 plant species, among which 100species serve as regular source of medicine[1]. *Chickmagalur* district is the home of tribal's and forest dwellers more than 30% of the population consists of the tribal people with immense traditional knowledge[2]. Ethno botanical survey on medicinal plants is the trend in Indian scenario, it form the base for phytochemical analysis in exploration of drug industry. Snake bite till date remains a Public Health hazard in India. There are about 216 species of snakes identifiable in India, of which 52 are known poisonous. An ethno botanical survey was conducted in and around *Chikmagaluru* district from nativaidya or alemari or local practitioners, twenty one plants identified as used for snake bite.

Index Terms - **Ethno botanical, Anti venom, tribal, Ayurveda, nativaidya or alemari or local practitioners**

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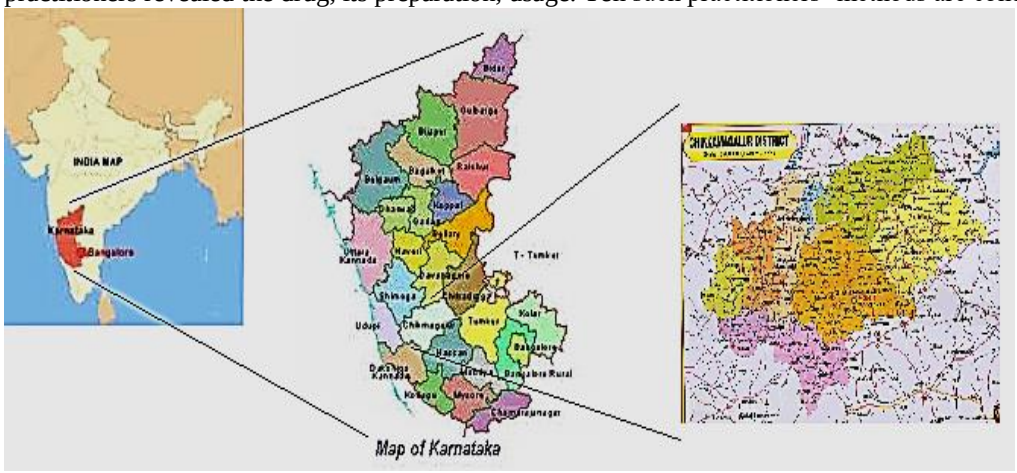
I. INTRODUCTION

In India, mostly in rural areas, health centers are inadequate and the snake bite victims mostly depend on traditional healers and herbal antidotes, as an alternative treatment. The treatment for snake bite is as variable as the bite itself. The only available treatment is the usagof antivenom against snake bite. The first antivenom (called an anti-ophidic serum) was developed by Albert Calmette, a French scientist of the Pasteur Institute in 1895, against the Indian Cobra (*Naja naja*). Antivenom binds to and neutralizes the venom, stopping further damage, but does not reverses the damage already done. Some individuals may react to the antivenom with an immediate hypersensitivity reaction[3]. Other alternative treatment involves the usage of folk and traditional medicines in snake bites. Medicinal herbs are the local heritage with global importance. Various plants have been used against snake bite, in folk and traditional medicine. In Ayurvedic system of medicine different plants and their compounds are reported to possess antisnake venom activity. The most common and effective method of treating snake bite victims is through antivenom, a serum made from the venom of the snake4. In India, polyvalent antivenom is prepared by Central Research Institute, Kasauli, Simla, and the Haffkine Corporation, Parel, Mumbai. The WHO has designated the Liverpool School of Tropical Medicine as the international collaborating center for ant venom production and/or testing[4]. Considering the geographical pattern of whole world, it is estimated that the true incidence of snake bite/envenomation could exceed 5 million/year. About 1, 00,000 of these develop severe squeal. Around 30-40 thousands of people die every day due to snake bite all over the World. Around 10,000-15,000 deaths are reported in India annually. Karnataka is one of the 13 states with highest prevalence of snake bite deaths. The study estimates that snake bites accounted for 2400 deaths in Karnataka in 2005. The common poisonous snake in India mainly include Indian Cobra (*Naja naja*), Common krait (*Bungarus caeruleus*), Russell's viper (*Daboia russelii*), Saw– scaled Viper (*Eechis carinatus*), have been reported from South india[5].

2. STUDY AREA:

Chikmagalur is district place situated in western ghat region of Karnataka, latitude 12.970002 and longitude of 77.560003. The city is situated near the highest peak in Western Ghats, the Mullayyanagiri and famous for coffee and areca nuts. The local practitioners revealed the drug, its preparation, usage. Ten such practitioners' methods are concluded.



3. MATERIALS AND METHOD:

Local practitioners in Kadur, Mudigere and Chikmagalur talluks of Chikmagalur district are many and some are giving herbal medicine to surrounding people since their ancestral time, as culture in their home. Each practitioner with ten to fifteen years of experience, are giving medicine to locals. Such practitioners selected and collected data from them. All are crudely taken hand ful of herbal parts and given for the soothing or removing the poisonous effect of snakes. Such plants data collected and listed below in table 1:

Result: Table 1

Plant	**Family**	**Preparation/specimen no.**	**Remedy reports**
Allium cepa L.	Iridaceae	Leaves or root tuber pounded and sap applied.	2
Bidens pilosa L.	Asteraceae	Crushed leaves of the plant are rubbed on fresh cuts as an astringent, snake bite antidote and antiseptic.	4
Conyza sumatrensis (Retz.) E. Walker.	Asteraceae	A leaf infusion of the plant is drunk as an antidote for puff adder (*Bitis arietans*) bites and stomachache.	7
Corchurus trilocularis L.	Tiliaceae	The crushed leaf infusion with *Hyptis pectinata* is dropped or sprinkled into the eye to neutralize snake venom ejected into the human eye. Afterwards, the victim is scarified on the hind torso. Claims of intense pain, temporary blindness and watery eyes were linked to this type of venom poisoning.	1
Dichondra repens J.R. Forst. & G. Forst.	Convolvulaceae	The plant leaves are rubbed onto snakebites to as an antidote to "remove snake fangs".	1
Erythrina excelsa Baker	Fabaceae	The bark sap is antidote for snake bites.	2
Grewia sp.	Tiliaceae	The leaves are snake bite antidote. Leaves used in cooking envenomed carcass – as a treatment preventing secondary poisoning. Livestock bitten by snakes are drenched with a leaf/ bark decoction/infusion and the mucilaginous crushed leaves used to wipe the bitten area.	3
Indigofera circinella Baker f.	Fabaceae	Poultices made from the leaves are chewed and pasted on snake bite as antidote.	3
Justicia calyculata (Deflers.) T. Anders.	Acanthaceae	Crushed aerial plant parts are used as a snake bite antidote, rubbed onto the snake bite to facilitate the removal of the snake's fangs.	1
Sansevieria parva N.E.Br.	Dracaenaceae	Leaf sap applied on snake bite wound.	1
Solanum incanum L.	Solanaceae	The stem or fruits cut into small pieces, dried in sun, pounded and powder applied. The sap of the fruits may also be directly	9

Plant	Family	Preparation/specimen no.	Remedy reports
		applied.	
Tagetes minuta L.	Asteraceae	Leaves crushed, soaked in water and infusion applied.	5
Triumfetta rhomboidea Jacq.	Tiliaceae	Roots crushed, soaked in water and infusion applied on bite area.	3
Vernonia glabra (Steez) Vatke	Asteraceae	The leaf ash or crushed leaves rubbed into scarifications around the snake bite as antidote.	1
Rauwolfia serpentina	Apocynaceae	The root decoction is antidote for snake bite. Both internal and external use.	3
Piper nigrum	Piperaceae	The root decoction is antidote for snake bite. Both internal and external use.	2
Cassia fistula	Ceasalpiniaceae	Bark decoction is used internally.	2
Tinospora cordifolia	Menispermaceae	Plant extraction given internally.	1
Rubia cordifolia	Rubiaceae	Plant extract given internally, paste applied externally.	2
Leucas aspera	Lamiaceae	Plant extract given internally, paste applied externally.	1
Mimosa pudica	Mimosaceae	Plant decoction given internally.	1

4. CONCLUSION:

In any time of our daily life we may face in remote areas, snake bites. The severe damage they cause is also well known. To avoid such occasions, we can use these herbal remedy for snake bite. Some of the plants are familiar to you may useful when you are in need. For the same purpose this data collected. And even our ancestral usage of plants should be documented for future use; this is also another cause for the collection of information.

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REFERENCES

1. Sainkhediya Jeetendra, Aske Dilip kumar, Ethno Medicinal Plants used by Tribal Communities for the treatment of snakebite in west Nimar: India ISCA Journal of Biological Sciences, June 2012; Vol.1 (2); p.77-9.
2. Antony Gomes, Rinku das, Sumana saekhel et al. Herbs and herbal constituents
3. Cannon R, Ruha A M & Kashani J, Acute hypersensitivity reactions associated with administration of crotalidae polyvalent immune Fab antivenom, *Ann Emerg Med*, 51 (2008) 407.
4. Johnson E K, Kardong K V & Mackessy S P, Electric shocks are ineffective in treatment of lethal effects of rattlesnake envenomation in mice, *Toxicon*, 25 (1987) 1347.
5. Gupta YK, Peshins SS. Do Herbal Medicines have potential for Managing Snake Bite Envenomation: Toxicology International, May-Aug 2012; vol-19 (2): p. 87-90
6. Njoroge G, Bussmann R, Gemmill B, Newton L, Ngumi V. Utilization of weed species as source of traditional medicines in central Kenya. *Lyonia*. 2004; 7: 71–87. [Google Scholar]
7. Mahmood A, Mahmood A, Malik RN, Shinwari ZK. Indigenous knowledge of medicinal plants from Gujranwala district, Pakistan. *Journal of Ethnopharmacology*. 2013; 148: 714–723. doi: 10.1016/j.jep.2013.05.035 [PubMed] [Google Scholar]
8. Cox PA.Will tribal knowledge survive the millennium? *Science*. 2000; 287: 44–45. [PubMed] [Google Scholar]
9. Gilani AH, Atta-ur-Rahman. Trends in ethnopharmacology. *Journal of Ethnopharmacology*. 2005; 100: 43–49. [PubMed] [Google Scholar]
10. WHO.Traditional Medicinen and Alternative Medicines. Geneva. 2002; Fact Sheet. No. 271.
11. Verpoorte R, Kim HK, Choi YH. Plant as source of medicines In: Bogers RJ, Craker L.E., Lange D., editor. *Medicinal and Aromatic Plants*. Netherlands: Springer; 2006; pp.261–273. [Google Scholar]
12. Colvard MD, Cordell GA, Villalobos R, Sancho G, Soejarto DD, Pestle W, et al. Survey of medical ethnobotanicals for dental and oral medicine conditions and pathologies. *Journal of Ethnopharmacology*. 2006; 107: 134–142. doi: 10.1016/j.jep.2006.04.005 [PubMed] [Google Scholar]
13. Cordell GA, Colvard MD. Natural products and traditional medicine: turning on a paradigm. *Journal of Natural Products*. 2012; 75: 514–525. doi: 10.1021/np200803m [PubMed] [Google Scholar]
14. Hayta S, Polat R, Selvi S. Traditional uses of medicinal plants in Elazığ (Turkey). *Journal of Ethnopharmacology*. 2014; 155: 171–184. [Google Scholar]

15. Farnsworth NR. Screening plants for new medicines In: Wilson E.O., Ed., *Chapter 9 in Biodiversity*, National Academy Press, Washington DC: 1988. [Google Scholar]

16. Purohit S, Vyas S. Medicinal Plant Cultivation: A Scientific Approach: Including Processing and Financial Guidelines. Agrobios (India). 2004.

17. Parmesan C. Ecological and evolutionary responses to recent climate change. *Annual Review of Ecology, Evolution, and Systematics*. 2006; 637–669. [Google Scholar]

18. Govaerts R. How many species of seed plants are there? *Taxon*. 2001; 1085–1090. [Google Scholar]

19. Ibrar M, Hussain F, Sultan A.Ethnobotanical studies on plant resources of Ranyal hills, District Shangla, Pakistan. *Pakistan Journal of Botany*. 2007; 39: 329. [Google Scholar]

20. Ahmad SS, Husain SZ. Ethno medicinal survey of plants from salt range (Kallar Kahar) of Pakistan. *Pakistan Journal of Botany*. 2008; 40: 1005–1011. [Google Scholar]

21. Qureshi RA, Ghufran MA, Gilani SA, Yousaf Z, Abbas G, Batool A. Indigenous medicinal plants used by local women in southern Himalayan regions of Pakistan. *Pakistan Journal of Botany*. 2009; 41: 19–25. [Google Scholar]

22. Mahmood A, Mahmood A, Shaheen H, Qureshi RA, Sangi Y, Gilani SA. Ethno medicinal survey of plants from district Bhimber Azad Jammu and Kashmir, Pakistan. *Journal of Medicinal Plants Research*. 2011; 5: 2348–2360. [Google Scholar]

23. Abbasi AM, Khan MA, Shah MH, Shah MM, Pervez A, Ahmad M. Ethnobotanical appraisal and cultural values of medicinally important wild edible vegetables of Lesser Himalayas-Pakistan. *Journal of Ethnobiology and Ethnomedicine*. 2013; 9: 66 doi: 10.1186/1746-4269-9-66 [PMC free article] [PubMed] [Google Scholar]

24. Akhtar N, Rashid A, Murad W, Bergmeier E. Diversity and use of ethno-medicinal plants in the region of Swat, North Pakistan. *Journal of Ethnobiology and Ethnomedicine*. 2013; 9: 25 doi: 10.1186/1746-4269-9-25 [PMC free article] [PubMed] [Google Scholar]

25. Murad W, Azizullah A, Adnan M, Tariq A, Khan KU, Waheed S, et al. Ethnobotanical assessment of plant resources of Banda Daud Shah, District Karak, Pakistan. *Journal of Ethnobiology and Ethnomedicine*. 2013; 9: 77 doi: 10.1186/1746-4269-9-77 [PMC free article] [PubMed] [Google Scholar]