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ETHNIC INFORMATION ON TREATMENTS FOR SNAKE BITES IN KADAPA DISTRICT OF ANDHRA PRADESH

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ABSTRACT:
The present study expresses the “Ethnic Information On Treatments for Snake Bites in Kadapa district of Andhra Pradesh”. Tribal people of this area have authentic information about antidotes for poisonous bites. They have been using different plant parts like leaves, fruits, stem bark, tubers and roots as antidotes in the form of paste, powder, juice, infusion, decoction, and in crude form. These plant parts are sometimes mixed with other additives like goat milk, butter milk and urine of infants. The present study brought to light the unrevealed age old treatments for poisonous snake bites in general and some particular snake bites. This study consist 34 species belonging to 23 families.

KEY WORDS: Ethnobotany, medicinal plants and snake Bites.

INTRODUCTION:
Now Ethnobotany is becoming a well established science due to increasing realization of health hazards and toxicity caused by synthetic drugs. Almost 80% of people in developing countries depend on traditional medicines for primary health care, most of which are derived from the plants. The village folk, especially the tribal people are still using the natural resources available in their surroundings to treat many diseases and accidental hazards like snake bites and anomalies. With this background present work was taken related “Ethnic Information On Treatments for Snake Bites in Kadapa district of Andhra Pradesh”.

Geographically, Kadapa district is situated within 13.43˚ and 15.14˚ of the northern latitude and 77.55˚ and 79.29˚ of the eastern longitude. The district spreads northwards beneath the Western slopes of the Eastern Ghats mountain range as a rough parallelogram, dented deeply in its Southern, Western and Northern boundaries. It is surrounded by Kurnool district on the
North, Chittoor district on the South, Nellore district and Prakasam district on the East and Anantapur District on the West. The total geographical area of the Kadapa district is 15,379 sq. Kms. with nearly 33% of it under forests. The forests of the district are of a dry deciduous type. The medicinal importance of the flora in this district was reported in the literature. (Gamble, J.S. 1915-1936; Nagaraju, N.and K.N. Rao 1990; Rajendran, A., N. Ramarao & A.N. Henry 1997; Reddy, K.N., C.S., Reddy, E.N. Murthy, C. Pattanaik and V.S. Raju 2007; Reddy, R.V. 1995.) the forest of this area is covered with vast flora like Couroupita guianensis Aubl., Dichrostachys cinerea (L.) Wight & Arn., Gmelina asiatica L. Helicteres isora L., Shorea tumbuggaia Roxb., Thespesia populnea (Linn.) Sol. Vitex negundo L. etc. The climate of Kadapa district is dry type, its minimum temperature, in November-January, at about 28-30 C. The hottest temperature ranges between the 40-45 ranges during April-May. Based on the Agro-climatic conditions the District falls both in Southern and scarce rainfall zone. Kadapa is one of the districts in Rayalaseema area, with an uneven, isolated rainfall in different parts of the district and with large dry tracts. The District’s normal rainfall is 700 mm and its actual rainfall varies from 400+ to 800+ mm. It gets its major portion of rainfall (around 60%) during June-September period through South-West Monsoon. More than 30% of its average rainfall comes from North-East Monsoon during October-December. It gets its remaining 10-15% of its rainfall during Winter Period (January-February) and in Hot Weather Period (March-May). The district has a population of 26,01,797 of which 4,09,492 belong to Scheduled Caste and 61,317 belong to Scheduled Tribes constituting nearly 16% and 2.5% of the population respectively. The density of population in the district is 168 persons per square kilometer. The tribal inhabitants of this area are Chenchus, Yerukulas and Yanadis or Irulas tribal groups. They have been living in thick forest zones from immemorial days and frequently met with snake bites. To over come these accidental hazards, generation to generation they strived hard to evaluate the therapeutic efficacy of many herbs and the successful stories passed on to the successors. Now these tribes have the treasure of good therapeutically valuable information for snakebites.

These tribal people of this area also have the knowledge to recognize the bite weather it is poisonous or not. For this they give Tamarindus indica L. fruits juice orally to the patient, if he tastes it as sour then the tribes decide the bite as non poisonous. If the patient is unable to taste it then the bite is confirmed as poisonous and suitable drug is used as antidote. This traditional knowledge of phyto therapy is very authentic by using potential medicine from
plants. Potential hill pockets Kadapa district of Andhra Pradesh are the main source for vast flora of medical plants.

**MATERIALS AND METHODS:**

Before the commencement of plant exploration trips several interviews were conducted in tribal gudems (villages of the representative hotspots in the study region). Mostly the elder people (about 60 years age or above), preferably gramapedda or peddamanishi (village leader), were involved in the interviews. The information regarding the dosage of crude drug, purpose of usage, mode of preparation and administration was carefully recorded in audiotapes as well as field notebooks. During this study ‘the information on 34 medicinal plants used as antidotes for poisonous bites was gathered by speaking and by accompanying with tribal people in fields. The voucher specimens for each species was collected in quadruplicates, which were carefully tagged with field numbers after making a critical observation on the habit, habitat, colour and odour of flowers, phyto-association, occurrence and other relevant ecological features, which cannot be discerned from dried herbarium specimens. The specimens were identified with the help of Gamble’s “Flora of Presidency of Madras” (1915-35) and other local/regional floras, recent monographs using salient features, recorded in field notebooks. The identification was further confirmed by the comparison with that of authenticated specimens, housed at Sri Venkateswara University Herbarium (SVU, Tirupati) (Ellis J.L. 1987 ;Jain, S.K., and R.R. Rao. 1977; Mhaskar, K.S. and J.F. Caius. 1931; Balaji Rao N. S., D. Rajasekhar and D. Chengal Raju 1995; Goud, P.S.P., K.S. Murthy, S.S. Rani and T. Pullaiyah 1997).

**ENUMERATION:**

1. *Alangium salvifolium* (L.f.) Wangerin. (Family: Alangiaceae) (Local Name: Uduga)
Oral administration of root bark infusion, about 30 ml. for every 2 hours after the bite up to 2 days works as an antidote for cobra bite.

2. Ammannia baccifera L. (Family Lythraceae) (Local Name: Agni Vendrapaku)
   About 20 gr. Whole plant powder administered orally, for every 4 hours with hot cow milk after the bite up to 2 days works as an antidote for Bungarus fasciatus bite.

3. Andrographis serpyllifolia RottLex Vahl. (Family: Acanthaceae)
   About 30 gr. Whole plant paste mixed with little amount of cow urine is administered orally for every 2 hours up to 12 hours works as an antidote for Russell Viper Russell Viper bite.

4. Anogeissus latifolia (Roxb. ex DC.) Wall. (Family: Combretaceae) (Local Name: Chiru Manu)
   Whole plant powder, about 20 gr., administered orally for every 4 hours up to 2 days works as an antidote for Bungarus fasciatus bite.

5. Atalantia racemosa Wt. and Arn. (Family: Rutaceae) (Local Name: Adivi Nimma)
   Oral administration of fruit pulp paste, about 25 gr. For every 2 hours up to one day works as an antidote to Cobra bite.

6. Bacopa monnieri (L.) Pennell. (Family: Plantaginaceae) (Local Name: Sambrani Chettu)
   Intaking of leaf powder decoction, about 40 ml, for every 3 hours up to one day is a good antidote for Cobra bite.

7. Bixa orellana L. (Family: Bixaceae) (Local Name: Jafra)
   About 15 gr. of paste prepared from roots with black pepper seeds is administered orally for every 2 hours up to 12 hours works as antidote for Bungarus fasciatus bite.

8. Calycoglossa floribunda Lam. (Family: Combretaceae) (Local Name: Bandimurugudu)
   Oral administration of Infusion prepared from dried leaves and stem bark, about 30 ml, for every 4 hours up to 2 days works as an antidote for Cobra bite.

9. Carmona retusa (Vahl) Masam. (Family: Boraginaceae) (Local Name: Nomu Chettu)
   Paste of whole plant, about 15-20 gr., is administered orally for every 2 hours up to 12 hours works as a best antidote for Russell Viper bite.

10. Cassia occidentalis L. (Family: Fabaceae) (Local Name: Kasinda)
    Oral administration of root paste, about 5-10 gr., mixed with 30 ml, of urine of infant for every 2 hours up to a day is a good remedy for Cobra bite.

11. Cassine glauca (Rottb.) Kuntze (Celastraceae). (Local Name: Noridi)
Oral administration of about 10 gr., root paste with garlic paste, about 10 gr., for every 6 hours up to 2 days is a good antidote for Pit viper bite.

12. *Ceiba pentandra* (L.) Gaertn. (Family: Malvaceae) (Local Name: Tella Buruga)
Oral administration of root paste, about 15 gr., with one ounce cow urine for every 3 hours up to 2 days is a best remedy for Cobra bite.

13. *Corallocarpus epigaeus* Rottl. and Wild. (Family: Cucurbitaceae) (Local Name: Naga Donda)
Dried tuberous root of this plant, root of *Aristolochia indica* and whole plant of *Andrographis paniculata* are pulverized. From this about 15-20 gr., of powder is administered orally, for every four hours after the snake bite up to 2 days is a good remedy for Cobra bite.

14. *Derris scandens* Roxb. (Family: Fabaceae) (Local Name: Chiratalli-Baddu)
Root powder with *Sapindus emarginatus* fruit pulp powder in equal quantities, about 15 gr., is administered orally for Pit viper bite.

15. *Thanthi Chettu*)
Paste of whole plant, about 15-20 gr., is administered orally for every 2 hours upto 2 days works as a best antidote for Russell Viper bite.

16. *Dichrocephala integrifolia* (L.f.) Kuntze (Family: Asteraceae) (Local: Murikaku)
About 50 ml, root bark infusion is administered orally as an antidote for *Bungarus caeruleus* bite.

17. *Ehretia canarensis* Miq. ex C.B.Clarke. (Family: Boraginaceae) (Local Name: Gavva Chettu)
About 20-30 gr. of coarsely grounded root bark is soaked in one glass of water (200-300 ml.) for one day. The filtered infusion, about 15-20 ml, is mixed with, about 10 gr., ghee and is administered orally for every 4 hours upto 2 days works as an antidote for Russell Viper bite.

18. *Hedyotis puberula* (G. Don) Arn. (Family: Rubiaceae) (Local Name: Chiri Veru)
About 25 gr. of root paste is directly administered orally for every one hour upto half of the day works as antidote for Cobra bite.

19. *Hoppea dichotoma* Hayne ex Willd. (Family: Gentianaceae) (Local Name: Nela Pathi)
Intaking of, about 40 ml, of root powder decoction for every 2 hours upto 12 hours and externally keeping of same preparation on the sight of bite work as an antidote for *Bungarus fasciatus* bite.

20. *Hugonia mystax* L. (Family: Hugoniaceae) (Local Name: Kakibira)
   Oral administration of, about 10 gr., root paste with garlic paste, about 10 gr., for every 2 hours upto half of the day is a good antidote for *Pit viper* bite.

21. *Justicia tranquebariensis* L.f. (Family: Acanthaceae) (Local Name: Visha malle)
   Leaf juice, about 15-20 ml, is administered orally for every one hour up to half of the day and keeping of leaf paste externally on the sight of snake bite work as an antidote for *Cobra* bite.

22. *Lantana indica* Roxb. (Family: Verbenaceae) (Local Name: Makkadambu)
   Leaf juice, about 30 ml, and root paste, about 15 gr., for every 2 hours upto one day are administered orally work as an antidote for *Russell Viper* bite.

23. *Luffa cylindrica* (L.) Roem. (Family: Cucurbitaceae) (Local Name: Gutti Beera)
   Leaf juice, about 10-15 ml, is administered orally for every 2 hours upto a day works as an antidote for *Pit viper* bite.

24. *Murraya paniculata* (L.) Jack (Family: Rutaceae) (Local Name: Golimi)
   About 30 ml, infusion prepared from shadily dried root powder is administered orally for every one hour upto 2 days works as an antidote for *Cobra* bite.

25. *Naringi crenulata* (Roxb.) Nicolson (Family: Rutaceae) (Local Name: Kukka Velaga)
   Oral administration of root paste, about 15 gr., with one ounce cow urine for every 6 hours for 2 days is a best remedy for *Cobra* bite.

26. *Neolamarckia cadamba* (Roxb.) Bosser. (Family: Rubiaceae) (Local Name: Rudrakshamba)
   About 50 ml., stem bark infusion is administered orally for every 4 hours upto one day works as an antidote for *Bungarus caeruleus* bite.

27. *Ochna obtusata* DC – (Family: Ochnaceae) (Local Name: Erra Juvvi)
   Oral administration of, about 10 gr., root paste for every one hour upto 12 hours is a good antidote for *Cobra* bite.

28. *Opilia amentacea* Roxb. (Family: Opiliaceae) (Local Name: Adavi-Bandaldhi)
   Oral administration of, about 20 gr., root paste for every 3 hours upto 2 days is a good antidote for *Bungarus caeruleus* bite.
29. Polyalthia korinti (Dunal) Thw. (Family: Annonaceae) (Local Name: Neelagutthi)
   Oral administration of, about 30 ml, root powder decoction for every one hour upto 12 hours is a good antidote for Russell Viper bite.

30. Polygala arvensis Willd. (Family: Polygalaceae) (Local Name: Khotho)
   Paste of whole plant, about 20-30 gr., is administered orally for every 2 hours upto day works as an a best antidote for Russell Viper bite.

31. Stereospermum colaïs (Buch. Ham. ex Dillon) Mabberley. (Family: Bignoniaceae)
   (Local Name: Tagada)
   About 25 gr. of root paste is directly administered orally for every 3 hours upto one day works as an antidote for Cobra bite.

32. Tylophora indica Wt. and Arn (Family: Asclepiadaceae) (Local Name: Mekameyan aaku)
   Leaf juice, about 20-25 ml, and root paste, about 25 gr., are administered orally for every 4 hours upto 2 days work as an antidote for Russell Viper bite.

33. Vicoa indica (L.) DC. (Family: Asteraceae) (Local Name: Adavi Proddutirugudu)
   Root paste about 15 gr., is administered orally for every 4 hours upto one full day and also root is kept as an amulet work as an antidote for Pit viper bite.

34. Wattakaka volubilis (Linn. f.) Stapf in Curtis (Family: Asclepiadaceae) (Local Name: Bandiguri-ginja)
   Leaf juice, about 10-15 ml, and root paste, about 15 gr., are administered orally for every 2 hours upto one day work as an antidote for Russell Viper bite.

DISCUSSION AND CONCLUSION:

The present study denotes The Age Old Traditional Treatments for Snake Bites in kadapa district of Andhra Pradesh. The main theme of this study is to protect the people from hazardous snake bites with in a reliable time. The tribal inhabitants of kadapa district area have authentic knowledge on antidotes for snake bites based on their ancient culture and ethnic practices. The present study brought to light the immense hidden knowledge of Tribal people on poisonous bites of Cobra, Bungarus fasciatus, Bungarus caeruleus, Russell Viper, Pit viper snakes consisting 34 species belonging to 23 families. They have been employing all these plants in the form of paste, powder, juice, decoction, infusion and also in crude form. Some of these tribal pockets claim no deaths of snake bites, till date, by administering their ethnic medicines. The majority of antidotes taste bitter, suggesting the presence of alkaloids, glycosides and saponins. Based on the present study and field
experiences it can be concluded the detailed scientific experiments are urgently needed to evaluate the efficacy of these antidotes.

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