

Herbal formulations used in treatment of kidney stone by native folklore of Nizamabad District, Andhra Pradesh, India

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ABSTRACT

Since ages, herbs are being used for treating different ailments in different parts of world by different communities. The present ethno-botanical explorations conducted in forest areas of Nizamabad resulted in the information on the plants used in treating many diseases. The most prevalent disease found in the area was Kidney stone. For which about 20 plants species belonging to 13 Angiospermic families are used. Of these, maximum species belongs to Amaranthaceae with 4 species, 2 species to Fabaceae, Malvaceae, Cucurbitaceae and Padaliaceae each. Information gathered from Nizamabad district indicates that the tribals and other village people of this region possess good knowledge of plants in treating different ailments, but their continuous and progressive exposure to modernization may result in extinction of the rich heritage of knowledge in the course of time. Majority of preparation are from leaves and some are of underground parts (like root, rhizome etc). Following communication includes the remedies against Kidney stone with the details like, method of preparation of medicine and its application. Among the plant parts used in different formulations, leaves are profusely used which is followed by stem, fruit and roots.

Key words: Andhra Pradesh, Herbal formulation, Kidney stone, Nizamabad.

INTRODUCTION

Nizamabad district is situated in the Northern part of the Andhra Pradesh and is one of the 10 districts of Telangana region in the state of Andhra Pradesh. The District is bounded on the north by Adilabad District, east by Karimnagar District, south by Medak district and west by Bidar District of Karnataka and Nanded district of Maharashtra. The geographical area is 7956 Sq. kms i.e. 19,80,586 acres spread over 923 villages in 36 mandals. Major rivers, such as, Godavari and Manjeera crosses Nizamabad district with some other streams Kalyani, Kaulas, Peddavagu also exist in the district.

The forest is covering area of 1.67 lacs hectares (4,18,450 acres) forming 22% of the total geographical area of the district. The forests fall under the category of Southern Tropical dry deciduous type. Thick forest belt produces major population of *Dalbergia*, *Tectona*, *Terminalia*, *Rhynchosia* species. The forest produce, which includes timber, fuel, bamboo and *Diospyros*

leaves, yields good revenue. Mangoes and Custard apples grow well in the district.

Forest Dwellers: As per 2001 census the total population of the district is 23.55 lacs. Of these tribal population is 1.65 Lacs. Lambada, Naikpod, Yerukalas are major tribal groups in the area. Of these, Lambada is found most abundant throughout the area. Besides these tribal groups, several other communities are residing as forest dwellers (Devesh & Mishra 2011), (Hari Shankar & Sanjay 2012) and (Mohammad and Suradkar 2011).

MATERIALS AND METHODS

For documentation of ethno-botanical information and collection of plant material, several tours were undertaken during the period 2009 - 2012. Data presented here is based on personal observations and interviews with traditional healers (Viz. medicine men, hakims and old aged people) and methodology used is based on the methods available in literature (Jain 1989) and (Jain & Mudgal 1999).

Ethnobotanical information gathered was documented in datasheets prepared. For collection of plant material, local informer accompanied to authors. Plant identification was done by using regional flora and flora of adjoining districts, (Pullaih and Rao 1995; Cooke, 1958). Herbarium specimens are deposited at the Herbarium Department of Botany, Deogiri College, Aurangabad. Medicinal uses of plants were compared with major published literature (Ambasta, 1992; Anonymous, 1948-1976; Asolkar *et al.*, 1992; Chopra *et al.*, 1956 and 1969; Jain, 1991; Jain, 1996; Jain, 1999; Kapur, 2001; Kirtikar &

Basu, 1933; Patil & Biradar, 2011; Prachi *et al.*, 2009; Reddy, 2007; Reddy, 2008; Sharma & Singh, 2001; Varsha, 2011 and Vijaybaskar, 2008).

Enumeration:

The present ethno-botanical explorations conducted in forest areas of Nizamabad resulted in the traditional plant uses of 20 plants species belonging to 13 families. Following data includes botanical name of species, family, vernacular name and details about its application. The uses which are not mentioned in the major literature consulted are considered as uses less known and such plants are marked by **asterisk.(*)**

Botanical Name	Family	Local Name	Uses
<i>Abrus precatorius</i> L. HDCA 1035	Fabaceae	Gurivinda	*Leaf juice 3 to 4 tablespoons, taken early morning for 15 days to dissolve kidney stones.
<i>Abutilon indicum</i> (L.) Sweet HDCA 1337	Malvaceae	Thuthura benda	Three leaves taken orally early morning empty stomach for 15 days to dissolve kidney stone.
<i>Aerva lanata</i> (L.) Juss. ex Schult. HDCA 1020	Amaranthaceae	Pindi kura	50-60 ml extract with 1 teaspoon seeds of <i>Cuminum cyminum</i> and sugar taken orally once a day for 10 – 15 days to dissolve kidney stone. Curry of leaves eaten twice a day for 10-12 days.
<i>Beta vulgaris</i> L. HDCA 1062	Amaranthaceae	Ullam gadda	*1glass of beet root juice taken early morning for seven days is useful to dissolve kidney stone.
<i>Celosia argentea</i> L. HDCA 1168	Amaranthaceae	Gunugu	*1gram seeds powder taken once a day for 5 days to dissolve kidney stone.
<i>Citrus medica</i> L. HDCA 1242	Rutaceae	Sudhi nimma	One inch fruit taken orally daily twice until dissolve kidney stone.
<i>Coccinia grandis</i> (L.) Voigt HDCA 1147	Cucurbitaceae	Donda	*20-40 ml extract of handful leaves with one tea spoon <i>Cuminum cyminum</i> seeds sugar and make volume up to 200 ml with <i>Phoenix sylvestris</i> toddy, given orally once a day for 5 days to dissolve kidney stone.
<i>Colocasia esculenta</i> (L.) Schott in Schott HDCA 1293	Araceae	Chemakura	*100 ml juice of rhizome taken once a day for 15 days to dissolve kidney stone.
<i>Cynodon dactylon</i> (L.) Pers. HDCA 1064	Poaceae	Garika gaddi	10-20 ml extract of whole plant with roots taken orally twice a day for 8 -10 days to dissolve kidney stones.

<i>Gomphrena serrata</i> L. HDCA 1572	Amaranthaceae	Nala gunugu	*One tea cup juice of handful leaves taken once a day for 5 days.
<i>Gossypium herbaceum</i> L. HDCA 1087	Malvaceae	Prathi chattu	*Unripe fruits roasted in burning ash thereafter, extract of fruit taken out and taken orally to treat kidney stones.
<i>Kalanchoe pinnata</i> (Lam.) Pres. HDCA 1482	Crassulaceae	Ranapala	Paste of leaves with <i>Eclipta prostrata</i> whole plant in equal proportion, made in to 1 gm pills taken orally one or two pills twice a day for 20 days to dissolve kidney stone.
<i>Lagenaria siceraria</i> (Mol.) Standl. HDCA 1480	Cucurbitaceae	Sorakaya	*1tea spoon seeds powder taken with sheep milk daily one time 7days to dissolve kidney stone.
<i>Pedaliium murex</i> L. HDCA 1001	Pedaliaceae	Yenugu palleru	The dried seed powder is taken with water for urinary problems, kidney stones and reducing heat.
<i>Sesamum orientale</i> L. HDCA 1155	Pedaliaceae	Nuvvulu	Whole plant with <i>Achyranthes aspera</i> whole plant burnt to ash, taken orally one table spoon twice a day for 41 days to dissolve kidney stone.
<i>Solanum virginianum</i> L. HDCA. 1079	Solanaceae	Nala mulaka	*Root powder is mixed with a curd and taken once a day for 7 days for dissolving kidney stones.
<i>Strychnos potatorum</i> L. f. HDCA 1202	Loganiaceae	Chilla ginjalu	*One tea cup decoction of handful roots taken orally twice a day for 20 days to dissolve kidney stone.
<i>Syzygium cumini</i> (L.) Skeels HDCA 1157	Myrtaceae	Allaneredu	*Fruit powder taken 1 spoon with water twice a day for 15 days to dissolve kidney stone.
<i>Tribulus terrestris</i> L. HDCA 1038	Zygophyllaceae	Chinna palleru	5 gm powder of fruits with one tea cup of milk taken orally twice a day for 2 weeks to dissolve kidney stone.
<i>Vigna unguiculata</i> (L.) Walp. ssp <i>unguiculata</i> . HDCA 1316	Fabaceae	Ulavalu	100 ml decoction of seeds taken orally twice a day for 30 days.

RESULTS AND DISCUSSION

Information gathered from Nizamabad district indicates that the tribals, and other village people of this region possess good knowledge of herbal drugs. Majority of the species used in treating Kidney stone are from families Amaranthaceae, Fabaceae, Malvaceae, Cucurbitaceae and Pedaliaceae and majority of preparation are from leaves (06), underground parts (4), Fruit (4), Seed (4), whole plant (2), etc. To test the scientific

validity of the herbal preparations or drugs, clinical studies are required, which can establish therapeutic properties of these preparations for safe use.

ACKNOWLEDGEMENT

Authors are thankful to Nizamabad folk people and (V. D & S.K.B) are thankful to the Chairman, Baliram Patil Mission's Mandvi, Shri Renukadevi College of Arts, Commerce and Science College, Mahur.

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How to Cite this Article:

Vijigiri Dinesh, Shivraj Kashinath Bembrekar and PP Sharma, 2013. Herbal formulations used in treatment of kidney stone by native folklore of Nizamabad District, Andhra Pradesh, India. *Biosci. Disc.*, 4(2):245-249.