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HERBAL FORMULATIONS USED IN THE TREATMENT OF KIDNEY STONE BY KORKU TRIBES OF AMBABARVA, DISTRICT BULDANA, MAHARASHTRA, INDIA

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Abstract

The study area is the part of Melghat tiger project which is situated in Satpuda range. Ambabarwa wild life sanctuary is the northern part of Maharashtra and southern part of Madhya Pradesh. The work is based on medicinal plants which are usually practice by Korku and Bhil tribes from the Ambabarwa in the treatment of kidney stone. In Buldana District kidney stone is the most prevalent disease. Tribal communities basically depend on locally available plants to cure their various ailments. Traditionalhealers of this region used various plant species in the treatment of kidney stone. Authors attemptto procure information about plant species which are practiced by the tribes of this region in the treatment of kidney stone.

Keywords : Herbal, Korku Tribes, Kidney stone, Ambabarwa wild life sanctuary, Buldhana, Maharashtra, India

Introduction

Ambabarwa is bounded by JalgoanJamodtahasil, district Buldana.It is situated in Satpuda range. It is the northern part of Maharashtra andbordering Madhya Pradesh in the North and East. This area Geographically located in latitude between $21^0\,44^1$ N and $21^0\,08^1$ N, longitude: between $76^0\,39^1$ E and $77^0\,31^1$ E. The total forest area of Ambabarwa is 127.11 sqkms areas. It is declared as wild life sanctuary notified in 1973-74. From the northern end of Melghat tiger reserve the “Tapi” river flows through the forest which lies in catchment area of river system. The characteristic feature of the study area is dry deciduous forest. For day to day requirement man is dependent on nature. So nature has healing properties. In Ancient days, man has been using plant remedies to cure his aliments.

Kidney is the largest filtration organ of the body. The problem of urinary stone or kidney stone is very ancient one and many remedies have been employed during the ages. These stones are found in all part of urinary tract, kidney, ureter urinary bladder etc.

Kidney stone or urolithiasis is the condition where urinary calculi are formed in the urinary tract. It is a common disorder estimated to occur in approximately 12% of the population, with a recurrence rate of 70-81% in males, and 47-60% in female. It causes serious health problems such as severe pain, urinary tract obstruction and infection that adversely affect well –being of individuals. kidney stone formation or urolithiasis is a complex processes that occur due to imbalance between promoters and inhibitors in the

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Vol-10 Issue-6 No. 15 June 2020

kidneys. The Factor affecting stone formation are urine output (hence the concentration).The concentration of specific constituent urine pH, and infection or damage within the urinary tract. (Tiwari Anand et al, 2012)

Material and Methods

For the documentation of ethno-medicinal information and collection of plant material several surveys were carried out during 2015 -2016 with the help of local herbal medicinmen of Ambabarva, JalgoanJamodtahasil, district Buldana, Maharashtra. The data presented here is based on personal observations and interviews with herbal practitioners (viz. medicine, hakims and old aged people) and methodology is based on the methods available in literature(Jain 1989) and (Jain and Mudgal 1999) .The medicinal utilities of plant species along with mode of administration is procured from tribal healer and experience herbal medicinemen in the region who practice crude plant drugs to cure kidney stone. Herbariums were prepared and plant identification was done by using regional floras and authenticated by taxonomist. The collected information from the herbal healers of the region were compared with published literature (Kirtikar and Basu, 1933; Sharma and Singh,2001; Patil and Biradar,2011).

Scientific names of the plant species with local name, family, parts used to cure kidney stone are given in the following table no.1

Table No. -1Medicinal plant used for kidney stone

Sr.no.	Plant name	Family	Plant part Used	Local name
1	*Abrusprecatorius* .L	Fabaceae	Leaf juice	Gunj
2	*Abutilon indicum*(Link) Sweet[1]	Malvaceae	Leaf juice	Petari/ Atibala
3	*Achyranthesaspera* L.	Amaranthaceae	Root	Aghada
4	*Argemonemaxicana* L.	Papaveraceae	Root	Satyanashi
5	*Asteracanthalongifolia*Nees.	Acanthaceae	Seed	Talimkhana
6	*Anthocephalascadamba*Miq.	Rubiaceae	Stem bark	Kadamb
7	*Amaranthusspinosa* L.	Amaranthaceae	leaf	Katerichavali
8	*Amaranthusviridis* L.	Amaranthaceae	leaf	Jangalichavali
9	*Bauhiniaracemosa* Lam.	Caesalpiniaceae	Stem bark	Kanchan
10	*Boerhaaviadiffusa* L.	Nytcaginaceae	Root	Punernava
11	*Bombaxceiba* L.	Bombaceae	Corm	Semal
12	*Bryophyllumpinnatum* (Lam) Oken	Crassulaceae	Leaf juice	Patari
13	*Cretevanurvela*(Buch.-Ham.)	Capparaceae	leaf	Yavarna
14	*Cyathoclinepurpurea*(Buch.-Ham.exD.Don)Kuntze	Asteraceae	Root	Dagadphodi/Gangotra
15	*Celosiaargentea* L.	Amaranthaceae	Seed	kaduu
16	*Citrusmedia*L.	Rutaceae	fruit	Khattanibu
17	*Clitoriaternate* L	Papilionaceae	leaves	Aparajita /gokarna
18	*Ensetesuperbum*.Roxb.	Musaceae	Seed	JangaliKeli
19	*Pogamiapinnata* L.	Papilionaceae	Bark	Karanj/kadubadam
20	*Terminaliaarjuna* (Roxb.)Wight&Arn	Combretaceae	Bark	Arjuna
21	*Lawsonia*inermis L.	Lathraceae	leaves	Jangalimehandi

ISSN: 2278-4632
Vol-10 Issue-6 No. 15 June 2020

22	*Punicagranatum* L.	Punicaceae	Fruit bark	Anar
23	*Cocciniagrandis*(L.)Voigt	Cucurbitaceae	leaves	Tendule
24	*Lagenariasiceraria*(Molina)Standl.	Cucurbitaceae	Seed	Bhopala
25	*Trianthemaportulacastrum* L.	Aizoaceae	Whole plant	Pandaravasu/ Khapkhundi
26	*Cuminumcyminum* L.	Apiaceae	Fruit	Jeera
27	*Spharanthesindicus* L.	Asteraceae	Whole plant	Gorakhmundi
28	*Tageteserecta* L.	Asteraceae	Flower	Zendu
29	*Tridexprocumbens* L.	Asteraceae	leaves	Kambermodi
30	*Vernoniacinerea* L.	Asteraceae	Whole plant	Sahadevi
31	*Chrysanthemumcoronarium* L.	Asteraceae	Leaves	Sevanti
32	*Thevetiaperuviana* L.	Apocynaceae	Root	Kaner
33	*Gymnemasylvestris* R.Br.	Asclepiadaceae	Leaves	Gudmar
34	*Solanumsurattense*Burm.f	Solanaceae	Root	Doskfodi
35	*Hyptissuaveolens*L.Poit.	Lamiaceae	Leaves	Road tulsi
36	*Kickxiaramosissima*(Wall.)Janchen	Plantaginaceae	Whole plant	Nikaybhashma
37	*Tribulusterrestris* L.	Zygophyllaceae	Fruit	Gokharu
38	*Marcotylomuniflorum*(Lam.) Verdc.	Fabaceae	Seed	Kulthi /Kultha/Holga
39	*Meliaazedarach* L.	Meliaceae	Bark	Bakan
40	*Colocasiaesculenta*(L.)Schott	Amaranthaceae	Rhizome juice	Jangalichamkura
41	*Euphorbiahirta* L.	Euphorbiaceae	Leaf	Lahandudhi
42	*Phyllanthusamarus* L.	Euphorbiaceae	Whole plant	Bhueiawala
43	*Ricinuscommunis*L.	Euphorbiaceae	Root	Erandi
44	*Gloriosasuperba* L.	Colchicaceae	Tuberous Root	Kallavi
45	*Tectonagrandis*L.f	Lamiaceae	Seed	Sag
46	*Urgineaindica*(Roxb.)Kunth.	Liliaceae	Bulb	Janglikanda

Discussion and Conclusion:

The information of 46ethno-medicinal plant species belonging to 31 families have been given which are used by the herbal healers of Ambabarwa to cure kidney stone.

Kidney stone or Urolithiasis is the condition where urinary calculi are formed in kidney or in urinary tract. It is acommon disorder estimated to occure in approximately 12% of the population, with a recurrence rate of 70-81% in males, and 47-60% in female. It causes serious health problems such as severe pain, Urinary - tract obstruction and infection that adversely affect well –being of individuals.

Though the treatment of kidney stone has been revolutionized by the development of non-invasive methods of stone disruption but patients always try to refrain from surgical procedures, moreover, it also carries the factors like high cost availability, side effects, etc. To treat this disorder, various drugs are used. Even

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Vol-10 Issue-6 No. 15 June 2020

improvement in medical techniques has developed invasive method of stone disruption like lithotripsy and surgical methods. But these methods are costly non- affordable to the poor section and the re-occurrence rate is also high (50–80%) The safest and cheapest remedy for the treatment includes the use of herbal formulations.Traditional herbal remedies which are regarded as quite safe, with less or no side effects , cost effective , readily available and easily affordable .

The plant species used by the medicinemen*Bryophyllumpinnatum*(Lam.) Oken., Prachi, *et al*., (2009), *Amaranthusspinosa*L., and*Tribulusterrestris*L.,Ghatapandit S.R. *et al*., (2010)*Achyranthusaspera* L., Aggarwal A *et al*., (2010)*Ensetesuperbum*Roxb., *Dolicandrone falcate* Seem. contain some bioactive compounds,these bioactivecompounds have good and helpful property to cure a kidney stone. Therefore, further chemical analytical work of such plant species will definitely helpful to design particular drugs. Now a day some medicinal plants in the region are vanishing due to over exploitation and because of anthropological activities. These plants are needs to be conserved.

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