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Ethnic herbal practices for gynaecological disorders from urali tribes of Idukki district of Kerala, India

T. P. Ajesh* and R. Kumuthakalavalli
Department of Biology, Gandhigram Rural Institute- Deemed University
Gandhigram, Dindigul, (T.N.) - India

Abstract

In the present investigation 29 plants belonging to 22 families traditionally used by the Urali women for various gynaecological purposes like abortion, anemia, antifertility, to prevent lactation, to clean uterus after delivery, contraction of uterus after delivery, to separate umbilical code from mother, for easy delivery, excessive bleeding on pregnancy, excessive menopause bleeding, Excessive menstrual bleeding/ Menorrhegia, Galactagogue, Leucorrhoea, Pain killer, Prevent bleeding after delivery and to regulate menstrual cycle. The documented species were enumerated alphabetically with botanical name, vernacular name, parts used, mode of preparation and approximate dosage has been provided for further pharmacological and clinical validation.

Key-Words: Urali Tribe, Idukki, Kerala, Gynaecological Disorders, Traditional Knowledge

Introduction

Plants and humans have an intimate biological relationship since the remote past and have evolved along a parallel line cooperating and depending upon each other for their existence**.** Indigenous people who acquired the knowledge of economic and medicinal properties of the plants by trial-and-error methods, transferred this knowledge is transferred orally to generations. Due to the modernization and developmental activities led by the governmental and non-governmental agencies, this ethnic knowledge is diminishing in a very high speed. Hence a, greater emphasis is being laid on the documentation of indigenous knowledge of ethnic people for bio prospecting of plants as sources of novel drugs, medicines, foods and other industrial raw materials.

Idukki, one of the beautiful hilly districts of Kerala, is located on the lap of Western Ghats and lie in the altitude of 900- 3000m above sea level in the Central-Eastern part of the state between North latitudes 9º.20' to 10º.20' and E longitude 76º.30' to 77º30'. The altitudinal difference within the district results in climatic variations, which in turn determines the vegetation pattern.

*** Corresponding Author**
Email: ajeshtphilip@gmail.com
Ph: 0451-2452371-76: Extn, 2103

The district stands for the second highest concentration of tribal population in Kerala state. There are about 36 scheduled tribes in Kerala, Muthuvans, Mannans, Mala Arayans, Uralis, Paliyas, Malapulayas and Malampandarams are the major tribals of this district. Most of these tribals are said to have migrated from the Madurai region of Tamil Nadu during the 13th – 14th century AD (Nair, 1994; Singh, 1994). However, among these eight tribes Uralis are one of the indigenous tribes inhabiting in the forests of Idukki. They living in about 33 settlements (*Kudis*) with the population of about 6,000 people. Once they were very rich with strong social setup. They had their own kingdom and a king. But due to some calamity/ warfare, most of the people died, and the rest ran off to the interior forest for living (in Malayalam; *Uru* = *village* + *Aliyavar* = *refugees*). Thereafter they were adopting agricultural practices, hunting, fishing and collection of NTFPs for their livelihood.

At present they are leading their life as coolies in nearby estates, forest watchers, fire line workers and forest nursery workers. Being in the remote areas they practice herbal medicines, single drug therapy (*Ottamooli*) for curing several diseases. The present study is considered that special attention should be paid to document the plant resources used by the Urali tribes of Idukki district for various gynaecological ailments and disorders.

Material and Methods

The study was conducted among the Urali tribes of Idukki district of Kerala. Preliminary inspection was carried out in the area to analyze the available resources and other infrastructural facilities that may foster and hamper the study. Intensive field surveys were conducted during 2010 December to 2012 July, with the help of village heads (*Kani*), medicine men (*Vaidya*), plant collectors and persons who have sound knowledge of plants. Later the ethnobotanical survey regarding the usage of medicinal plants available in the local area for treating various gynaecological ailments and disorders were conducted by using questionnaire (Jain, 1989 and Martin, 2008). The questionnaire allowed descriptive responses of the plants such as parts used, medicinal uses, mode of preparation and mode of administration. The information gathered was cross checked with one midwife and a tribal healer of the colony. The collected data such as plant parts used, ratio of ingredients added, mode of preparation, nature of the drug prepared, dosage, precautions if any were recorded accurately and also crosschecked with a midwife and a tribal healer of the colony. The collected specimens were identified with the help of the *Flora of The Presidency of Madras* (Gamble, 1915-1935), Flora of British India (Hooker, 1875 – 2006). The voucher specimens were deposited in the herbarium of Department of Biology, Gandhigram Rural Institute Deemed University, Gandhigram Dindigul, Tamil Nadu. The documented species were enumerated alphabetically with botanical name, vernacular name, parts used, mode of preparation and approximate dosage (Table 1).

Results and Discussion

The settlements of Urali tribes are isolated from the outside world and remain cut off for a long period of time. Hence, the benefits from the advancement of the medical science is far from reach to these tribals and indigenous system of care and age-old procedure is still being retained and practiced for all common ailments including gynaecological ailments and disorders. It is because majority of the tribal women depend on plant based, locally available medicines for curing various disorders, and they would not willing to come out of hamlets and appear in the outside world. Almost every house is a repository of maternal health related knowledge and is being practiced by families with elderly people. This indigenous knowledge is depleting at an alarming rate due to the lack of interest among youngsters; therefore it is an urgent need to explore and document this unique knowledge before its extinction.

For the present study, 32 informants (26 females, 6 males) in the age group of 55-82 years were contacted for data collection and it was observed that 29 plant species belonging to 22 families (Four species from Fabaceae, three species from Solanaceae, two species each from Malvaceae and Liliaceae and the rest of 18 families with a single species each) are being used by the Uralis against various gynaecological treatments like abortion, anemia, antiseptic, to prevent lactation, to clean uterus after delivery, contraction of uterus after delivery, to separate umbilical code from mother, for easy delivery, excessive bleeding on pregnancy, excessive menopause bleeding, excessive menstrual bleeding/ menorrhegia, galactagogue, leucorrhoea, pain killer, Prevent bleeding after delivery and to regulate menstrual cycle (Fig.1). Several parts of the plants such as root, stem, bark, leaves, flowers, fruits, tuber & rhizome and whole plant are used for various preparations. Among the different plant parts documented and utilized, highest proportion with leaves (20%); followed by roots (17%); tuber & rhizome (14%); bark, flower and flower buds (13%); fruits (10%) clums and whole plant (3%) (Fig. 2).

The enumeration revealed that 16% of formulations are being used against e excessive menstrual bleeding/Menorrhea, 13% of each as abortifacient and Galactagogue, 9% of each as analgesic during the pregnancy period and easy delivery, 6% as antiseptic and 3% each for anemia, antifertility, to prevent lactation, to clean uterus after delivery, contraction of uterus after delivery, to separate umbilical code from mother, excessive bleeding on pregnancy, excessive menopause bleeding, leucorrhoea, prevent bleeding after delivery and to regulate menstrual cycle (Fig.3).

The critical evaluation of the literature gives an insight to the utilization of some of the plants are well recognized in the gynacecological treatments among various tribal communities (Tiwari et al.,1982; Jain,1991; Yadav et al.,2006; Jomy et al., 2010;Rajith et al,2010, Wadankar et al,2011; Ajesh et.al,2012). However, among the information gathered in the present study, many of them were not yet documented.

There are several studies available on various aspects of Ethnobotanical, socio-cultural anthropology of the Uralis of Idukki (Udayan et al, 2006; Sasidharan & Jomy, 2006; Sabu et.al, 2011). But very few studies have been made on plants used by Uralies for gynaecological purposes. Hence the present study was undertaken on ethnic herbal practices of Urali tribes of Idukki district for various gynaecological disorders and ailments.

Conclusion

In recent times the usage and popularity of folk medicine is increasing day by day and this field of research is being focused towards the identification of effective and safe drugs. In this perspective the result of the study on documentation of gynaecological practices among Urali tribes of Idukki district not only helps in probing the past but also in bringing in even fragmentary information on Indigenous knowledge to time light. More clinical and pharmacological studies need to be conducted to investigate the unexploited potentials of the recorded plant species.

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Table1: Plants used for gynaecological disorders by Urali tribes of Idukki district

S./No	Botanical Name	Common Name	Family	Parts used	Mode of Administration
1	*Abrus precatorius* L.	Kunni	Fabaceae	seeds	Seeds without seed cot is kept overnight in milk and the seed paste is given on the last day of menstruation to prevent conception
2	*Aloe vera* (L.) Burm.	Kattarvazha/ Cherukattala	Liliaceae	Fleshy leaf	Leaf is chopped and given to the women before 2 day of delivery for easy delivery.
3	**Asparagus recemosus** Willd.	Chathaveri	Liliaceae	Tuber	5-10 ml of juice is given two twice for three weeks after delivery as Galactagogue
4	*Azadirachta indica* A.Juss.	Veepu	Meliaceae	Bark	Grind it with water, add 100ml in 100 ml butter milk and consumed to control excessive Menstrual bleeding
5	*Bombax cebiba* L.	Kattu Ilavu	Bombacaceae	Flower bud	Paste of flower bud(2g) mixed with honey and taken orally for a week to regulate menstrual cycle
6	*Butea monosperma* (Lam.) Taub.	Plasu	Fabaceae	Flower	Used to prevent bleeding after delivery
7	*Calamus thwaitesii* Becc.	Anachooral	Arecaceae	Fruits	Powdered well and mixed with honey make as pills used as Abortifacient.
8	*Canabis sativa* L.	Kanjavu	Cannabaceae	Leaves	Used as a pain killer at the time of delivery
9	*Capsicum frutesence* L.	Kanthary	Solanaceae	Fruits	Fruit is mixed with dried coconut and prepare as chuttny- helps to clean the uterus after delivery.
10	*Carica papaya* L.	Oma	Caricaceae	Root	10 cm long root of male plant in 1 liter of water and make a decoction, mixed with one spoon of charred elephant dung and consume three times in a day to induce Abortion
				Tender fruit	Tender fruit is cooked with white rise or ragi as food for a week. As Galactagogue
				fruit	Tender or ripened Raw

					fruit is taken orally cause abortion for the first three months.
11	*Clerodendrum infortunatum* L.	Peruku	Verbinace	Leaves	Leaf ash is mixed with coconut oil and applied on the wound of umbilical-code as Antiseptic.
12	*Curculigo orchioides* Gaertn.	Nilapana	Amaryllidaceae	Tuber	2- 5ml of Juice is taken orally to relief pain after delivery.
13	*Curcuma longa* L.	Mnjal	Zingiberaceae	Rhizome	Dried rhizome powder and cotton cloth ash is mixed with coconut oil used as an antiseptic on the wound of umbilical code
14	*Cyathula prostrate* (L.)Blume.	Kadalady	Amaranthaceae	Whole Plant	Prepared as paste and applied over the abdomen when Delivery is delayed
15	*Datura metel* L.	Ummam	Solanaceae	Seeds	Seed are kept in one glass of cow milk overnight and filtered the milk and given orally in empty stomach to induce Abortion
16	*Datura stramonium* L.	Ummam	Solanaceae	Leaves	Leaves are heated over the fire and tied over the brest for a week to arrest lactation.
17	*Desmodium trifolium* (L.) DC.	Cheru palladi	Fabaceae	Leaves	5ml of leaf juice is mixed with honey (*cheru thaen*) and take orally in empty stomach for a week against excessive menstrual bleeding.
18	*Erythrina stricta* Roxb.	Murikku	Fabaceae	Bark	Juice is mixed with honey and taken orally in empty stomach for one week to cure Leucorrhoea.
19	*Evolvulus ulsinoides* L.	Vishnukranthy	Convolvulaceae	Flower	About 10-15 gm Flower is grinded with honey and prepared as pills, for 3- 5 days to avoid excess bleeding from womb at the time of pregnancy.
20	*Hemidesmus indicus* (L.) R.	Palvalli	Periplocaceae	Root	Used as a Galactagogue
21	*Hibiscus rosa-sinensis* L.	Chemparathy	Malvaceae	Flower	Flowers are eaten in raw form to prevent excessive Menustral and Menopaus bleeding
22	*Malvaviscus penduliflorus* D.C.	Mulakuchempara thy	Malvaceae	Flower	Flowers are eaten in raw form to prevent excessive Menustral bleeding
23	*Moringa pterygosperma*	Muringa	Moringaceae	Leaves	Cooked with coconut oil

	Gaertn.				and used as curry for rice, act as Galactagogue
24	*Ochlandra travancorica* Gamble	Eetta	Poaceae	Clums	Used to cut the umbilical code
25	*Oroxylum indicum* (L.) Benth.ex Kurz.	Vellapathri	Bignoniaceae	Bark	Decoction(5ml) is administered for two week against Menorrhegia
26	*Plumbago zeylanica* L.	Koduveli-vwlla	plumbaginaceae	Tuber	Juice of the tuber is used for the removal of placenta and the contraction of uterus after delivery
27	*Rubia cordifolia* L.	Manjistta/ Chovvallikkodi	Rubiaceae	Whole plant	Prepared as decoction and add 100gm Jaggery take orally to avoid Anemia during Pregnancy period
				Root	Prepare a paste and massage it over the abdomen from top to bottom when delivery is delayed.
28	*Thottia siliquosa* (Lam.) Ding.	Alpam	Aristolocaceae	Root	Root paste is applied over the stomach to get relief the abdominal pain during pregnancy
29	*Zizipus oenoplia* (L.) Mill.	Thodalli	Rhamnaceae	Bark	Paste of bark (2.5ml) mixed with honey after supper for two week against abnormal pain during pregnancy

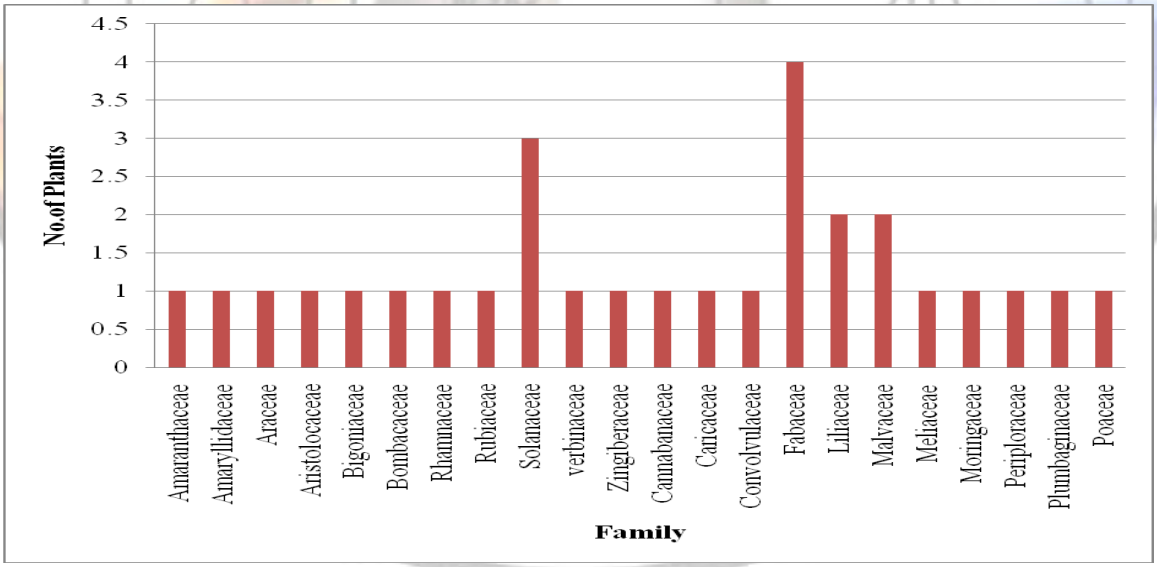

Fig. 1: Familywise analysis of plants used by Uralies for gynaecological treatments

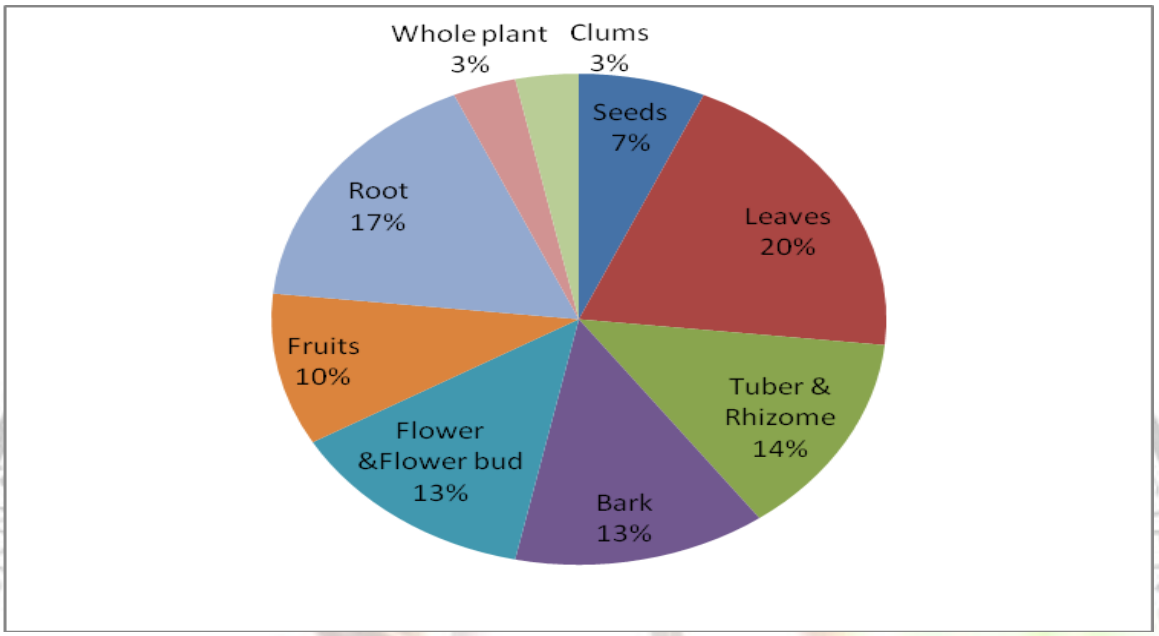

Fig. :. Partwise analysis of gynaecological plants used by Urali tribe of Idukki district

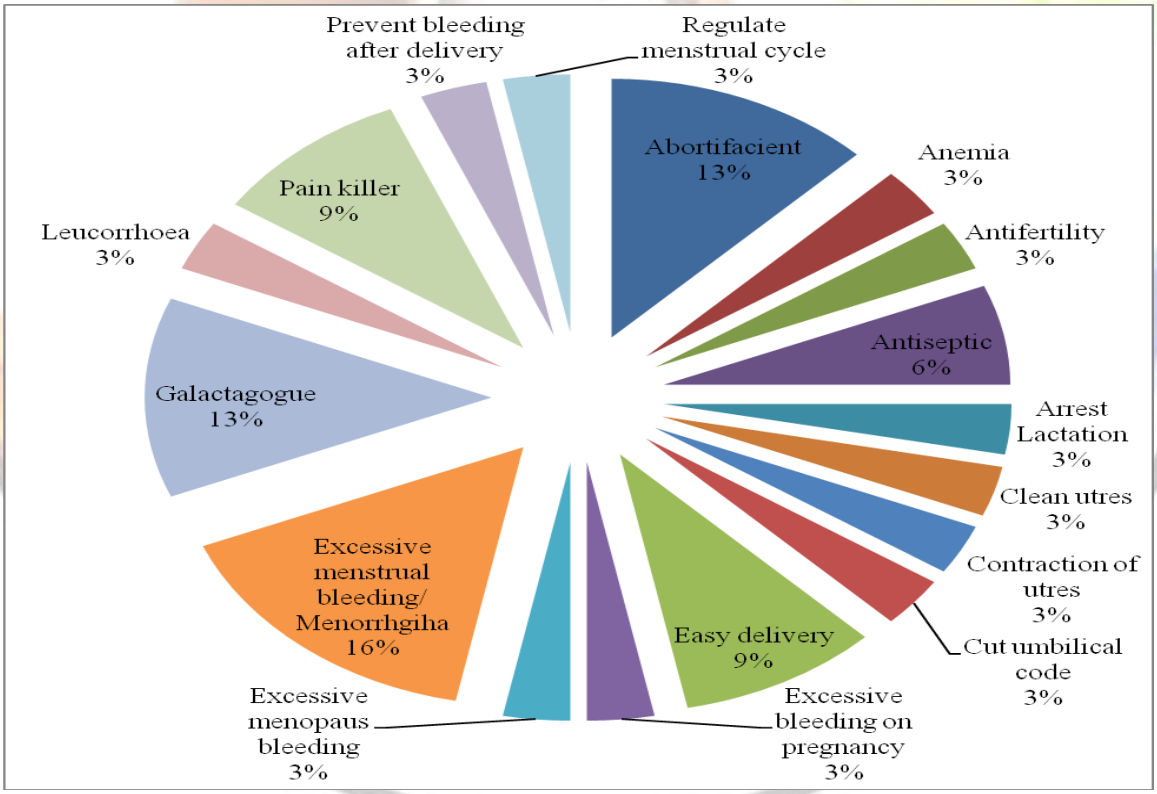

Fig. 3: Pie- chart showing mode of action of gynaecological plants used by Urali tribe of Idukki district