A survey on the traditional use of fertility inducing plants used by herbal practitioners in Tamil Nadu, India.

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Abstract

Herbs and herbal products have been used traditionally to cure almost all ailments of human as well as animals. In the Ayurveda, Siddha, and Unani, are detail description of use of plants as medicine has been found. The South-Eastern Region of India is one of the richest biodiversity hotspots, with more than 500 species of medicinal plants used by different tribal population groups as contraceptives and treating reproductive anomalies. It has been observed that more than 70% of the people living in some tribal dominated areas of Tamil Nadu even today depend largely on traditional Medicinal system. In the present study, well-experienced traditional herbal medicine practitioners were interviewed about the uses of herbs to cure infertility and to induce fertility in three districts of Tamil Nadu, India. The preliminary survey clearly indicated that an Ethno-medicinal plants species have been still in the use for treatment of sterility or enhancing fertility or for vitality by some rural people in the Tamil Nadu.

Key words: Herbs, Traditional practitioners, fertility, infertility, reproductive anomalies.

Introduction

Herbal medicines are the most widely used medicines in the world today. A full eighty-five percent (85%) of the world’s population employs herbs as their primary medicines Evidence of the use of plants for medicinal purposes dates as far back as 60,000 years ago in both Western and Eastern cultures; in both developed and under developed countries. Over 50% of all modern clinical drugs are of natural product origin and thus these products play important roles in drug development in the pharmaceutical sciences.

The compounds found in the plants that are not required for normal functioning of the body, but have a beneficial effect on health or play an active role in amelioration of diseases. Now-a-days, the demand for more and more drugs from plant sources is continuously increasing. It is therefore essential to evaluate plants of medicinal value systematically for various ailments that are used in traditional medicine.

The South-Eastern Region of India is one of the richest biodiversity hotspots, with more than 500 species of medicinal plants used by different tribal population groups for treating reproductive anomalies. The knowledge of the use of plants to treat diseases has been with the local medicine practitioners for generations after generation handed down from father to son or mother to daughter but has not been recorded. This knowledge remains mostly with the traditional medical practitioners who are mostly old people of remote places. Most of the medicinal plants are collected from the wild habitat. The present work was designed to document the indigenous plants used by the traditional medicine practitioners in some lower districts of Tamil Nadu, India.
Study Area

The present study was carried out in three administrative districts of Tamil Nadu, India viz. Coimbatore, Thani and Kambam. All the three districts are tribal dominated and densely populated. Most of the inhabitants are village people and depend mainly on agriculture and are economically very weak. The districts under study, Coimbatore, Thani and Kambam lie between latitudes 25.46 to 26.49 South, 20º9´ to 26º95´ South and 26º5" - 26º49" North respectively and Longitudes 90.48 & 91.50 East, 91º45´ to 92º22´ East and 90'39' - 91'17' East respectively. Tamil Nadu.

Survey Methodology

Ten respondents from each district were included for the present study. The area of study was selected on the basis of following considerations…

a). Areas where people approach first the local herbal practitioners for the treatment of most of the ailments.

b). Areas where medical facilities are scanty.

c). Areas where people are economically weak.

d). Areas where the transportation facilities are not available.

Collection of Data

During the survey all the sources scrutinized in this study. Till today the people of Tamil Nadu traditionally use various sex medicines for remedies of sex diseases particularly in villages prescribed by the folk healers. The general procedure for collection of data according to the use of plants to treat infertility and reproductive abnormality were followed as described by Martin (1950), Barthakur (1976) and Bellany (1993). The procedure comprised of by personal contact with village medicine men, herbal drugs practitioners and by personal observation on application of the drugs. The information collected included formulations, ailments for which the formulations were used and dosages. Local names of the plants were obtained from the informant and the plant specimens were collected, prepared herbarium and identified with Department of Botany ,Rabinot Herbarium, Trichy, Tamil Nadu , India.

Results and Discussion

The Table 1, shows the results of the survey work conducted during February 2014 to July 2015. In the enumeration, plants are arranged with scientific names along with local names, family, the parts used and mode of application. The use of plant extracts as fertility enhancer in animals is now in the increase because of the shifting of attention from synthetic drugs to natural plant products .Dada and Ajilore (2009). In rural Tamil Nadu, there is practice of folk medicine since the time immemorial. During this survey areas dominated by tribal people and also economically weak areas were chosen where there is tremendous faith on the traditional medicine.

In the present study, a total of 33 no of plants were recorded for their use to induce fertility and reproductive ailments. All the preparations are given by the traditional practitioners in crude forms. Fertility enhancing properties of many plants have been evaluated by many workers. Muanya et.al.,(2008) reported the aphrodisiac activity of herbal combination which
includes *Discorea spp.*, *Mucuna pruriens* has been reported by many workers as antioxidant. Yamini *et al.* (2001) anti tumour and anti oxidant agent Rajeshwar *et al.* (2005) ; fertility enhancer and aphrodisia Shukla, *et al.* (2007); estrogenic. Shahaji *et al.* (2011); and many other roles.

Sexual function improving effect of *Myristica fragrans* was studied by Tajuddin and his co workers in 2005. The alcohol extract of *Argeria nervosa* can enhance male sexual activity in normal mice . Subramaniam *et al.* (2007). Male fertility enhancing effect has been established in plants like *Moringa oleifera* Lam[Lilith et al.(2010); Nigella sativa Sa'a'idi, (2009); Lophira lanceolata* Etuk and Muhammad (2009). *Abelmoschus maniho* Rewatkar (2010) and many others. Fertility enhancing properties in female are also studied on *Ficus asperifolia* Ngadjuia *et al.* (2009); *Lepidium meyenii* Ana *et al.* (2005) etc.,

Now the medicinal plants as a whole occupy a stable position in modern medicine, since the pharmaceutical industry is showing special interest in using or synthesizing natural substances extracted from the plants. Therefore, the information generated from the present study regarding the medicinal plant use by the traditional practitioners need a thorough phyto-chemical investigation. This could help in creating mass awareness regarding the need for conservation of such plants and also in the promotion of ethno-medico-botany knowledge within the local people.

Acknowledgement

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References


Kamla Kant Shukla, Abbas Ali Mahdi, Mohammad Kaleem Ahmad, Shyam Pyari Jaiswar, Satya Narain Shankwar and Sarvada Chandra Tiwari(2007). Mucuna pruriens Reduces Stress and Improves the Quality of Semen in Infertile Men .eCAM 2007; Page 1 of 8


Table: 1. List of plants used by the herbal practitioners in some parts of the state of Tamil Nadu, India, to induce fertility, parts used, mode of preparation and administration
<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Local name</th>
<th>Scientific name</th>
<th>Family</th>
<th>Parts used</th>
<th>Mode of application</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sisso maram</td>
<td>Dalbergia sisoo Roxb.</td>
<td>Fabaceae</td>
<td>Leaf</td>
<td>4-5 crushed leaves were poured for overnight in a glass of water. Next morning the decoction is mixed with sugar and was given to the women in empty stomach for 15 days</td>
</tr>
<tr>
<td>2.</td>
<td>Ashwagandha</td>
<td>Withania somnifera Dun.</td>
<td>Solanaceae</td>
<td>Root, Leaf.</td>
<td>One cup of the juice of root and stem were mixed with milk. Seven such doses were given from the 5th day of the menstrual cycle.</td>
</tr>
<tr>
<td>3.</td>
<td>Thannervittan kizhangu</td>
<td>Asparagus recemosus Wild.</td>
<td>Liliaceae</td>
<td>Root.</td>
<td>10 g of the root powder was used to prepare the decoction with one cup of water. The dose was prepared with this decoction mixed with honey. This dose was given to both the partners suffering from infertility for 7 days.</td>
</tr>
<tr>
<td>4.</td>
<td>Puli</td>
<td>Tamarindus indicus Linn.</td>
<td>Caesalpiniaceae</td>
<td>Flower.</td>
<td>5 number of flowers were crushed to make a paste and mixed with one cup of milk and that dose was continued for 7 days.</td>
</tr>
<tr>
<td>5.</td>
<td>Punai vali</td>
<td>Mucuna pruriens Linn.</td>
<td>Fabaceae</td>
<td>Seed</td>
<td>10-15 g of seed juice is mixed with one cup of goat milk and this dose is prescribed to take for one month.</td>
</tr>
<tr>
<td>6.</td>
<td>Ananta mul</td>
<td>Tylophora indica(Burm.f.)Merr.</td>
<td>Asclepiadaceae</td>
<td>Root.</td>
<td>Equal amount of root of T.indica, W.somnifera and leaf of Ocimum gratissium are mixed and make a juice. Half a cup of this juice is given daily for 15 days.</td>
</tr>
<tr>
<td>7.</td>
<td>Sevalli kodi</td>
<td>Dioscorea villosa Linn.</td>
<td>Discordeaceae</td>
<td>Leaf</td>
<td>The leaves are boiled in water and the decoction is given at bed time daily for 21 days.</td>
</tr>
<tr>
<td>8.</td>
<td>Gnazhigam</td>
<td>Ipomea aquatica.Forssk.</td>
<td>Convolvulaceae</td>
<td>Leaf</td>
<td>Decoction of the leaves is given for 14 days after the menstrual flow.</td>
</tr>
<tr>
<td>9.</td>
<td>Helochi (Neer kizhangu)</td>
<td>Enhydra fluctans Lour.</td>
<td>Astaraceae</td>
<td>Root, Leaf.</td>
<td>One tea spoon of juice of root and stem is mixed with one cup of fresh goat milk for 21 days.</td>
</tr>
<tr>
<td>10.</td>
<td>Mamaram</td>
<td>Mangifera indica Linn.</td>
<td>Anacardiaceae</td>
<td>Seed cotyledons</td>
<td>10 gms of dry seed cotyledons is grinded and mixed with goat milk.</td>
</tr>
<tr>
<td>11.</td>
<td>Vallarai</td>
<td>Centella asiatica(L.) Urban.</td>
<td>Apiaceae</td>
<td>Leaf</td>
<td>Leaves of C asiatica, fruit of Allium sativum and seeds of Nigella sativa in equal amounts are mixed to make a paste. One tea spoon of the paste is given as one dose for three days.</td>
</tr>
<tr>
<td>12.</td>
<td>Nochi</td>
<td>Vitex negundo Linn.</td>
<td>Verbenaceae</td>
<td>Leaf</td>
<td>Fumigation from the dried leaves is given daily at night to increase libido.</td>
</tr>
<tr>
<td>13.</td>
<td>Sivappu thutti</td>
<td>Abroma</td>
<td>Sterculiaceae</td>
<td>Leaf</td>
<td>one cup juice of the root and stem and mixed</td>
</tr>
<tr>
<td>14.</td>
<td>Keerai</td>
<td>Amaranthus viridis Linn.</td>
<td>Amaranthaceae</td>
<td>Root.</td>
<td>Juice of the root is made by grinding and one tea spoon of such juice is given orally for twenty five days.</td>
</tr>
<tr>
<td>15.</td>
<td>Bhedailota</td>
<td>Paederia scandens (Lour.) Merr.</td>
<td>Rubiaceae</td>
<td>Leaf and stem.</td>
<td>Juice of stem and leaf is used to recover the post pregnancy related problems</td>
</tr>
<tr>
<td>16.</td>
<td>Tulasi</td>
<td>Ocimum americanum Linn.</td>
<td>Lemiaceae</td>
<td>Leaf and root</td>
<td>Half a cup of the fresh leaf juice mixed with honey. The dose is given at morning time in empty stomach for 14 days after the fifth day of menstrual cycle.</td>
</tr>
<tr>
<td></td>
<td>Ingredient</td>
<td>Scientific Name</td>
<td>Family</td>
<td>Part</td>
<td>Description</td>
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<tr>
<td>17.</td>
<td>Water pepper</td>
<td>Polygonum hydropiper Linn.</td>
<td>Polyganaceae</td>
<td>Leaf</td>
<td>One cup of the leaf juice is given daily to enhance fertility in women. The dose is continued for 15 days.</td>
</tr>
<tr>
<td>18.</td>
<td>Kattu Vazhai</td>
<td>Musa balbisiana Colla</td>
<td>Musaceae</td>
<td>Body</td>
<td>The tree trunk is cut at about 3 feet height from the base and a portion at the upper end is removed to make a hole. Then the hole is covered with the leaf for overnight. In the morning, the liquid deposited in the hole is collected and taken in empty stomach. This will increase the total no of sperm and thus helps in overcoming impotency.</td>
</tr>
<tr>
<td>19.</td>
<td>Neela pazhuppu vazhai</td>
<td>Musa velutina Wendl. &amp; Drude</td>
<td>Musaceae</td>
<td>Root</td>
<td>From the third day of menstrual cycle till the eighth day the root juice with water is given in the morning in empty stomach. This helps in inducing the ovulation process.</td>
</tr>
<tr>
<td>20.</td>
<td>Kurunthotti ver</td>
<td>Sida cordifolia Linn.</td>
<td>Mulvaceae</td>
<td>Leaf</td>
<td>One cup of root juice is given for seven days</td>
</tr>
<tr>
<td>21.</td>
<td>Nahar</td>
<td>Mesua ferrea linn.</td>
<td>Clusiaceae</td>
<td>Bark and root</td>
<td>Juice of fresh root and stem bark is mixed with goat milk in equal volume to make a final volume of one cup.21 such dose is given at bed time daily.</td>
</tr>
<tr>
<td>22.</td>
<td>Karanai kizhangu</td>
<td>Alocasia indica(Lour) Koch</td>
<td>Araceae</td>
<td>Root</td>
<td>Fresh bark is collected and crushed to make a pill. On the first day of menstrual cycle 2 gm of the bark is used to make a pill and is given to the subject. On the 2nd day of menses 2.5 gm of the bark is used and on the 3rd day 3 gm is used to make the pill. From the 4th day onwards till the 15th day of menstrual cycle 5 gm bark is given as one pill. All the pills are given in empty stomach and is said to give best result in menstrual pain relief.</td>
</tr>
<tr>
<td>23.</td>
<td>Nerunchi</td>
<td>Tribuls terrestris Linn.</td>
<td>Zygophylaceae</td>
<td>Leaf and seed</td>
<td>Equal amount of leaf and seed is taken and juice is prepared from this. One cup of such juice is given in morning time daily for seven days</td>
</tr>
<tr>
<td>24.</td>
<td>Arjuna maram</td>
<td>Terminalia arjuna (DC) W. &amp; A.</td>
<td>Combretaceae</td>
<td>Bark</td>
<td>Half a cup (50 ml) of the juice of stem bark is mixed with honey to make a dose. One such dose is given orally daily for 15 days</td>
</tr>
<tr>
<td>25.</td>
<td>Nayuruvi</td>
<td>Achyranthus aspera Linn.</td>
<td>Amaranthaceae</td>
<td>Leaf</td>
<td>One half cup of the leaf juice is given for 15 days to cure the problem.</td>
</tr>
<tr>
<td>26.</td>
<td>Iruvachi</td>
<td>Bauhinia purpurea L.</td>
<td>Caesalpiniaaceae</td>
<td>Bark</td>
<td>one tea spoon of the bark juice is mixed with honey and is given from the fifth day of menstrual cycle three months.</td>
</tr>
<tr>
<td>27.</td>
<td>Arugambul</td>
<td>Cynodon dactylon(L.).Pers.</td>
<td>Poaceae</td>
<td>Leaf</td>
<td>Equal volume of juice of the leaf of C.dactylon and juice of flowers of Hibiscus rosa sinensis are mixed. One cup of such juice mixed with little amount of sugar is given daily for seven days.</td>
</tr>
<tr>
<td>28.</td>
<td>Coffee</td>
<td>Acacia arabica</td>
<td>Mimosaceae</td>
<td>Bark</td>
<td>Pill prepared from fresh stem bark is given for seven days.</td>
</tr>
<tr>
<td></td>
<td>Name</td>
<td>Scientific Name</td>
<td>Family</td>
<td>Part</td>
<td>Preparation and Administration</td>
</tr>
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<tr>
<td>29.</td>
<td>Azhilai palai</td>
<td><em>Alstonia scholaris</em> R.Br.</td>
<td>Apocynaceae</td>
<td>Bark</td>
<td>Stem bark decoction is mixed in equal volume with goat milk and given for 15 days.</td>
</tr>
<tr>
<td>30.</td>
<td>Maruthani</td>
<td><em>Lawsonia inermis</em> Lam.</td>
<td>Lythraceae</td>
<td>Leaf</td>
<td>10-15 leaves are soaked in a glass of water overnight. Next morning the decoction is given in empty stomach and the dose is continued for three days.</td>
</tr>
<tr>
<td>31.</td>
<td>Elanthai</td>
<td><em>Ziziphus jujube</em> Lamk.</td>
<td>Rhamnaceae</td>
<td>Leaf</td>
<td>Young leaves are mixed with the young leaves of <em>Psidium guajava</em>, <em>Punica granatum</em>, <em>Centella asiatica</em> and <em>Allium sativum</em> in equal amounts are mixed to make a paste. One tea spoon of such past is given orally in empty stomach from the last day of menstrual flow and continued for seven days.</td>
</tr>
<tr>
<td>32.</td>
<td>Peraratthaei</td>
<td><em>Alpenia Galanga</em> L.</td>
<td>Scitamineae</td>
<td>Leaves and rhizome</td>
<td>The leaves are boiled in water and the decoction is given at bed time daily for 21 days</td>
</tr>
<tr>
<td>33.</td>
<td>Inchi</td>
<td><em>Zingifer officinale</em></td>
<td>Zingiferaceae</td>
<td>Rhizome</td>
<td>The rhizome is used as a stimulant.</td>
</tr>
</tbody>
</table>