Indigenous Uses of Plants to Induced Fertility and Anti-Fertility in Garhwal Region, India

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Abstract
The aim of the present study is to find out herbs which are helpful to induce fertility and antifertility in human beings. A survey of villages of Garhwal region was done to identify medicinally important plants used by local peoples of that region to induce fertility and antifertility. Paper deals with 18 herbal medicines described by local peoples used to induce fertility and 8 herbal medicines used to induce antifertility.

Keywords: Herbs, Fertility, Antifertility, Indigenous uses, Garhwal region

Article history:
Received: 27 May, 2013
Accepted: 01 June, 2013
Available online: 01 November, 2013

1. Introduction
Modern medicines have provided several preventive and corrective methods of antifertility none of which is very safe and without any serious side effect. Many countries have already banned the use of normal contraceptives because of its carcinogenic effects. The discovery of some herbal contraceptives, safe and sure is the very need of the hour. In the same way fertility rate is also decreasing due to many reasons in modern life. A search has been made for plants used as anti-fertility and fertility inducing plants. It has been considered that herbal drugs are cheaper and safer as compared to synthetic drugs and may be used without any side effect. The women, elderly people, ethnic groups, local vaidyas and traditional herbal healer has attained a valuable degree of perfection in use of fertility inducing as well as fertility inhibiting herbal medicines and drugs.

Garhwal Himalaya is the central part of Western Himalaya (29° 26'- 31° 28' N and 77° 49'- 80° 6' E). Due to its unique topography, ethnic uses of plants are in traditions of people of this area. Garhwal (Fig.1 and 2) include seven districts- Dehradun, Haridwar, Pauri, Chamoli, Tehri, Uttarkashi and Rudraprayag representing mountains lower hills, tarai Bhabar belt and plain area. These hills have been a potent source of a variety of healing herbs. The therapeutic values of some of these plants are mentioned in our Vedic literature. In the past, due to the lack of communication, people were almost fully dependent upon local herbs remedies. The elderly people, ethnic groups, local vaidyas had considerable knowledge about plants which they collect from the surrounding forests.

Figure 1: India Map showing Uttarakhand State
Herbal antifertility and fertility drugs were used even by the primitive people of ancient civilizations to control fertility and prevent pregnancy and to induce fertility. (Billore and Audichya 1978), (Tewari and Chatuvvedi 1981), (Kishore and Bhat 1982), (Kamboj and Dhawan 1982), (Hemadri and Rao 1983), (Jain 1986), reported antifertility and fertility herbal drugs used by the primitive societies of India.

The plants pointed out by local inhabitants were collected, identified botanically with the help of flora- Forest flora of the Chakrata, Dehradun and Saharanpur forest Divisions Uttar Pradesh (Kanjial 1928), Herbaceous flora of Dehra Dun (Babu 1977), Flora of District Garhwal: North West Himalaya (Gaur 1999), Flora of Chamoli (Naithani 1984 & 1985), Collected plants were preserved in the herbarium of Govt. P.G. College Kotdwar (Garhwal).

2. Objectives of Research

The present study is result of documentation of indigenous knowledge about medicinal plants from Bhabar region in Uttarakhand which is collected from local inhabitants by questionnaire method. These findings are helpful in saving the indigenous knowledge of that area by which these herbs can be used and they are safer than any other medicines. The present study has been done in the year between 2006 and 2008.

3. Materials and Methods

The documentation of traditional knowledge from local peoples has been conducted during ethnobotanical studies. The information was collected by interviewing local inhabitants, local vaidyas and traditional herbal-healers prevalent in Bhabar region. They have immense knowledge about plants and drugs, from many years by collecting plants and their parts to prevent birth as oral contraceptive and anti-fertility agents and also as fertility inducing agent.

4. Summary

The present study undertaken in the Bhabar region of Garhwal Himalaya of Uttarakhand state of India. The study carried out in between 2006 to 2008 year. The plants used by village peoples as a medicine indifferently. Due to expensive medicine and far away hospitals and dispensaries from their village they mostly depend on herbs. The knowledge of herbs they got from their forefathers and by experience of themselves. The present study was done to find out which herbs were used to induce fertility and antifertility. The indigenous medicine knowledge was collected from local people.

5. Results and Conclusion

The 26 herbal plants used by Local inhabitants of Bhabar. 8 uses of plants as anti fertility inducing agent and 18 uses of plants as fertility inducing agent plants has been briefly described in the paper along with botanical names, vernacular name family and method of preparation of drugs. The knowledge of plants used by traditional herbal healers for antifertility purpose and fertility would be of immense help to replace synthetic drugs.

5.1 Plant species and their uses to induce fertility in human being are enumerated as under

1) Cordia dichotoma Forster. f., Lisoda, Boraginaceae. Its seed is given orally.
2) Tamarindus indica Linn., Imli, Caesalpeniaceae. The seed powder is given orally.
3) Acacia arabica Willd., Kikar, Leguminosae, Asparagus ascedendens Buch.Ham.ex Roxb., Satawar, Liliaceae. The gum of kikar mixed with satawar is given to the woman.
4) Piper longum Linn., Poppel, Piperaceae, Ferula asafoetida Linn., Hing, Butea monosperma (Lam.) Kuntze, Dhak, Fabaceae. The ash of powdered mixture of peepoli, hing, Dhak flower is mixed with suhaga is given with milk of mare before three days of menstrual period.
5) Symlocos racemosa Roxb., Pathani loth, Symlocaceae. The bark powder is suggested to woman orally.
6) *Sapindus mucrosii* Gaertner, Reetha, Sapindaceae. The white coloured seeds powder of reetha is given orally.
7) *Asparagus adscendens* Buch.Ham.ex Rxb., Satawar, Liliaceae. The bark powder is given orally.
8) *Curculigo orchiodes* Gaerth., Kalimusli, Amaryllidaceae. The powder of its branches is given orally.
9) *Saraca asoca* (Roxb.) DeWilde, Ashok, Caesalpiniaceae. The bark powder is given orally.
10) *Terminalia arjuna* (Roxb. ex DC.) Wight and Arn., Arjun, Combretaceae. The bark powder is given orally.
11) *Withania somnifera* (L.) Dunal, Ashwaganda, Solanaceae. The bark powder is given orally.
12) *Papaver somniferum* Linn., Khasa, Papaveraceae. Its seed grinded with water is given to antifertilized women.
13) *Cinnamomum cassia* Blume., Taj, Lauraceae. Its grinded bark is given orally.
14) *Myristica fragrans* Houtt., Jaiphal, Myristicaceae. The seed powder is given orally.
15) *Streblus asper* Lour., Sihora, Moraceae. The seed powder is used in antifertility.
16) *Ficus benghalensis* Linn., Bar, Moraceae. The root powder is used in antifertility.
17) *Linum usitatissimum* Linn., Alsi, Linaceae and *Ficus benghalensis* Linn., Bar, Moraceae. The grinded mixture of Alsi mixed with bar root powder and given to the antifertilized woman.
18) *Croton tiglium* Linn., Jamalghota, Euphorbiaceae. The seed powder is used in antifertility.

5.2 Plant species and their uses to induced antifertility are enumerated as under
1) *Chenopodium album* Linn., Bathua, Chenopodiaceae, *Saccharum officinarum* Linn.,Ganna, Poaceae. The dried seed powder with treacle or Gur is given regularly at the interval of 24 hours during the period extending from one menses to another one.
2) *Curcuma domestica* Valeton, Haldi, Zingiberaceae. The dried powder of haldi with cow milk is given regularly at the interval of 24 hours to reduce fertility in both male and female.
3) *Vitex nigundo* Linn., Nirgundi, Verbanaceae. The fresh juice of the leaves is given orally to the female regularly at the interval of 24 hours during the period extending from one menses to another one.
5) *Gloriosa superba* Linn., Kalihari, Liliaceae. The dried powder of tuber of is placed inside the vagina during intercourse regularly everyday to reduce fertility in female.
6) *Curcuma zedorea* (Berg.) Rosc., Kachur, Zingiberaceae. The dried powder of tuber of kachur is placed inside the vagina during intercourse.
7) *Curcuma aromatica* Salisbury, Ban-haldi, Zingiberaceae. The dried powder of tuber is given orally with boiled cow milk and honey, regularly once a day to reduce fertility in both male and female.
8) *Azadirachta indica* A. Juss., Neem, Meliaceae. The dried seed powder with boiled water is given orally regularly at the interval of 24 hours during the period extending from one menses to another one. The fresh decoction of flowers is given orally regularly before going to bed to reduce fertility in both male and female.

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**Limitations**

In this research we tried to collect the information from maximum local peoples of the villages of the area but it is possible that some information is left. The limitations are such that after proper examination the persons can use herb. May be the person is allergic to the herb or they may have some another disease. These influence the interpretation of results in such a way that the herbs are safe but depend upon body of a person, how it may react.

**Recommendations**

The herbs which are used by people first see that they may be allergic to any herbs or have any other diseases. All these information about herbs are checked by laboratories.

**Conclusion**

The herbs are valuable to all living beings. But some awareness is necessary to use any herbs.

**Acknowledgement**

The authors are thankful to the elderly people, ethnic groups, local vaidyas of Bhabar region for their help. The corresponding author is grateful to the co-author Dr. J.C. Ghildiyal who is the Principal of Government Degree College Chakrota, Dehradun, India for his kind cooperation during the tenure of this work.
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