

Ethno-medicinal plants used in Birth Control by Tribals of Kota region of Rajasthan

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ABSTRACT

An extensive survey of Kota region of Rajasthan with special reference to Jawahar Sagar Sanctuary area was undertaken to document the traditional medicinal plants used for birth control by tribal communities. The uses of herbal contraceptives are well known by the ancient civilization and are still being followed by the tribal population for the purpose of birth control and prevention of pregnancy. Traditional medicinal plants could prove effective in controlling our country's ever increasing population. The present study highlights 25 plant species that are being used for birth control and abortion by tribal communities including Bhil, Meena and Gujar residing in the Jawahar Sagar Sanctuary area, near Kota, Rajasthan.

Key words : Ethnomedicine, Jawahar Sagar Sanctuary, Abortifacient.

Human culture has been augmented by plants and plant products since time immemorial. The practice of traditional folk medicine is a vibrant and one of the most important aspects of ethno-botany. Ethnobotany is related to the traditional relationship and the interactions between aborigines and their surrounding plant wealth¹³. Ethnobotany is the first science that originated with the evolution or existence of man on this planet. The medicinal properties of plant species have made an outstanding contribution in the origin and evolution of many traditional herbal therapies⁶.

Rajasthan is one of the largest states of India and represents 10.41% of the country's total geographical area. It has a rich heritage of culture and diversified habitat. Rajasthan state is a broadly divided into three main parts viz., Western Rajasthan, Central Rajasthan and South-east Rajasthan. South-east Rajasthan is also known as Hadoti region and it comprises of Kota, Bundi, Baran and Jhalawar districts. Jawahar Sagar Sanctuary area is part of south-east Rajasthan. The climate of the south-east

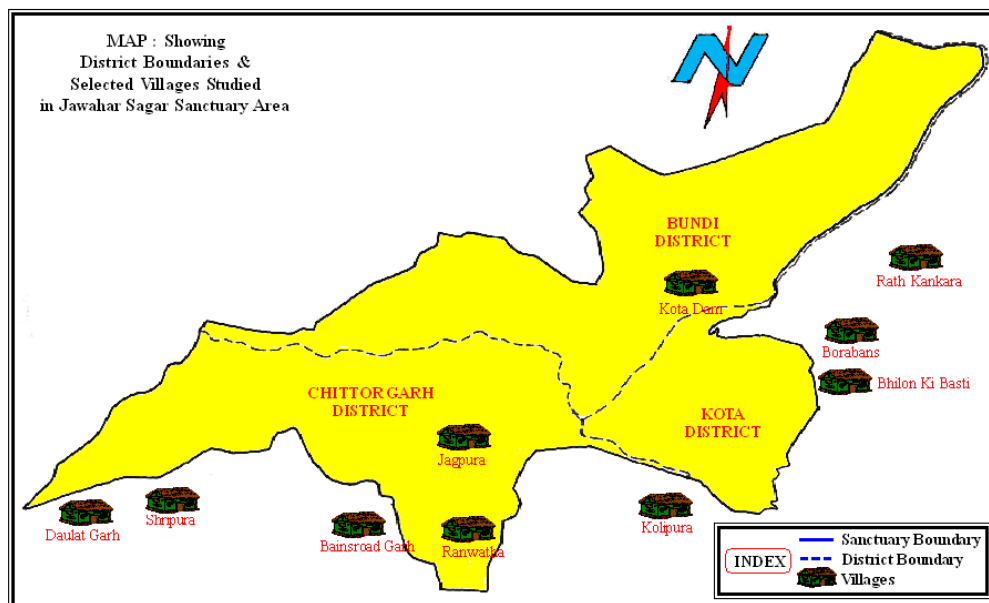
Rajasthan is tropical with the maximum temperature ranging between 38.0°C to 47.0°C in summer and minimum between 8.0°C to 12.0°C during winter.

It is a well known fact that the wealth of any country lies in its healthy population. Demographic projections reveal that India will precede China in terms of populous by 2030. According to National Population Stabilization fund, at present the country's population count (1198 million) is only second to china (1345.8 million). By 2050, India is estimated to be home to 1613.8 million people¹². Thus the nation's rapid growing population has become a major problem and the use of traditional phyto-medicine could probably help in controlling unwanted pregnancies. Several investigators have studied the role of ethno-medicinal plants used for birth control and as anti-fertility herbs for women in India and other parts of the world^{1,2,7,8}. Perusal of literature indicates that only very little work has been published in Rajasthan³. Therefore, in this communication an attempt

has been made to record medicinal plants which are being used for birth control and as abortifacient by different tribes of the study area.

Frequent field visits were conducted to selected ten villages of Jawahar Sagar Sanctuary area of Rajasthan. Information was gathered about traditional knowledge on medicinal plants used for birth control and abortion. Field trips were conducted with the local medicine men. Personal interviews were carried out with the help of a preplanned schedule and data sheets^{4,10}. Questionnaires were used for data collection which included local name of plants, family useful parts, detailed method of drug preparation and administration. For authenticity about medicinal properties of plants, information collected during field work was verified at different places through discussions. The plants are enumerated alphabetically with botanical names followed by local names, family, part used and mode of application in Table-1.





In the present investigation 25 medicinal plants were documented which were used for anti-fertility and birth control, such as *Butea monosperma*, *Calotropis procera* and *Elytraria acaulis* etc. Some of the plants in the present study have been well recognized by Indian systems of medicine in Ayurveda for birth control. Among these are *Abrus precatorius*, *Butea monosperma*, *Gloriosa superba* and *Ficus religiosa* etc.

Use of *Elytraria acaulis* and *Vitex negundo* for birth control by the tribal were observed in study area, though no such observations have so far been available in the literature. The present findings indicated that tribal and rural people are well acquainted with the wild flora around them. Some of the plants reported for birth control and abortion from the study area have also been reported from different parts of the world with similar uses^{2,11}. *Ficus religiosa* and *Ricinus communis* were

used as anti-fertility herbs in the study area and similar observations have been reported by many researchers in India and Rajasthan^{1,7,3,5}. Thus, tribal knowledge for birth control could prove to be more beneficial in paving a healthy future for our country. Incessant efforts are required to discover uses of these medicinal herbs in the form of birth-control pills for the benefits of the society.

The decoction of bark and leaves of *Annona squamosa* and *Azadirachta indica* by Bhil ladies was used as oral contraceptive and these observations have been supported by many researches^{13,7}. It is known that plant species *Pergularia daemia* is being used by rural people of Bangladesh for inducing abortion¹¹ or as anti-fertility herb. Similar observations were also noted in the study area. Hence, detailed chemical and pharmacological investigations are necessary to verify the ethno-medicinal claims on these plants. Population explosion is



Medicinal Plants used for Birth Control

Table-1. Enumeration of Plants used for Birth control and Abortion

S.No.	Botanical name \ Common name	Family	Plants	Mode of application part
1	<i>Abrus precatorius</i> L. Rattti, Chirmu	Fabaceae	Seed	4-5 seeds powdered & paste applied in vagina regularly for three days to induce abortion.
2	<i>Annona squamosa</i> L. Sita phal	Annonaceae	Seed	Seed and leaves powdered & paste applied as vaginal spermicide.
3	<i>Azadirachta indica</i> A. Juss. Neem, Neemda	Meliaceae	Gum, Seed	Gum and seed oil are mixed and sponge used as vaginal contraceptive.
4	<i>Butea monosperma</i> Lam.) Taub Dhak, Chaura	Fabaceae	Seeds	3-4 roasted seed powder is mixed with cow's milk and taken early morning from the commencement of menses for three days.
5	<i>Calotropis procera</i> (Ait) R.Br. Aakdo	Asclepiadaceae	Latex	Latex applied in vagina to induce abortion.
6	<i>Calotropis gigantea</i> Ait.f. Safed Aakdo	Asclepiadaceae	Latex	Latex and leaves paste applied in vagina to induce abortion.
7	<i>Carica papaya</i> L. Papitao	Caricaceae	Fruit	2 tablespoon decoction of unripe fruits with seed powder taken orally for seven days to prevent pregnancy.
8	<i>Clerodendrum multiflorum</i> Burm L.f. Arni	Verbenaceae	Bark Root	Decoction of bark and root used as anti-fertility agent.
9	<i>Dendrocalamus strictus</i> Nees. Bans	Poaceae	Root Leaves	Root piece (approx. 2c.m.) and 5-6 leaves decoction taken orally for seven days as anti-fertility agent by both male and female.
10	<i>Elytraria acaulis</i> L.f. Pathar pod	Acanthaceae	Whole plant	Whole plant paste mixed with curd and given two tablespoon for five days as oral contraceptive.
11	<i>Gloriosa superba</i> Linn. Kalihari	Liliaceae	Root	Decoction of 2c.m. root piece with 3-4 piper seeds given orally three times to women for abortion.
12	<i>Ficus religiosa</i> L. Pipali	Moraceae	Receptacle	1/4 cup decoction of receptacles given for seven days immediately after menses serves as oral contraceptive.

13	<i>Foniculum vulgare</i> Mil.l Sauf	Apiaceae	Fruit	3-4 tablespoons fruit extract taken orally for seven days after menses is used as oral contraceptive.
14	<i>Mucuna pruriens</i> L. Kauch ki phali	Fabaceae	Seed	5-7g seed powder given with milk twice daily after menses for three days as contraceptive.
15	<i>Momordica charantia</i> L. Karaelo	Cucurbitaceae	Fruit	Decoction of 1-2 fruits helps in reducing fertility in both males and females.
16	<i>Lannea coromandelica</i> (Hout.) Merrill Gunjn	Anacardiaceae	Stem, Bark	Stem and bark extract (1\2 cup) mixed with 8-10 Mahua flower extract given orally twice daily for a month prevents pregnancy.
17	<i>Parkinsonia aculeata</i> L. Paliao	Fabaceae	Leaves	Leaves paste applied for abortion.
18	<i>Passiflora foetida</i> L. Kishan pushpa	Passifloraceae	Whole plant	Whole plant paste is used as vaginal spermicide.
19	<i>Piper nigrum</i> L. Gola mirch	Piperaceae	Seed	10-12 seeds given with sugar water for controlling fertility.
20	<i>Pergularia daemia</i> (Forsk.) Chiov.Dhudhi ki bel	Asclepiadaceae	Whole plant	2 tablespoon of whole plant extract given orally for abortion.
21	<i>Plumbago zeylanica</i> L. Choti arayal	Plumbaginaceae	Whole plant	Fresh paste of whole plant is applied as vaginal spermicide.
22	<i>Prosopis cineraria</i> (Linn) Druce Khejda	Mimosaceae	Flower	5-6 flowers mixed with sugar eaten by tribal females for abortion.
23	<i>Ricinus communis</i> L. Aran	Euphorbiaceae	Root	2-3 teaspoons of root extract given with water orally for seven days to prevent pregnancy.
24	<i>Vitex negundo</i> L. Nagad	Verbenaceae	Seed	Seed powder given twice daily after menses for fifteen days serves as oral contraceptive.
25	<i>Wrightia tinctoria</i> R.Br. Dhudhi	Apocynaceae	Stem, Bark	Stem and bark decoction (1\4cup) given with water for 7days after menses serves as oral contraceptive.

the greatest problem that India is facing today. Modern medicine has provided several preventive and corrective drugs for contraceptive measure. But at the same time these medicines are known to have many side effects. The discovery of some herbal contraceptives which are safe and sure is the need of the present time.

The documentation of ethno-medicinal plants will help in developing strategies for the conservation of traditional knowledge. Also, consistent efforts are required to protect the medicinal rich pocket of Jawahar Sagar Sanctuary area.

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