Document heading: Review Article

Herbal Contraceptives: Anti-fertility Activity of Herbal Plants

Rahul Solakhia^{1*}, Jyoti Gupta², Bharat Parashar³

¹Student, IEC school of Pharmacy, IEC University, Baddi (H.P), India ²Head, IEC school of Pharmacy, IEC University, Baddi (H.P), India ³Dean, IEC school of Pharmacy, IEC University, Baddi (H.P), India

Received: 20-02-2019 / Revised: 26-03-2019 / Accepted: 05-04-2019

Abstract

The Nature is providing us with a lots of source medicine in the form of herbal plants since from the existence of human on the earth and now many of the modern drugs have been isolated from natural sources. Herbal plants became a common word which came in everyone mouth while thinking for the treatment of diseases which sometimes cann't be treated by allopathic medicine. Plants showing activity as contraceptives were well known by the ancient physicians. Various herbal medicinal plants have shown its activity during modern scientific research test for their antifertility activity in both male and female. Herbal contraceptives are not as much effective as pills but can be used as an alternative with lower side effect. People who are interested in family planning or not interested in getting pregnant are usually not interested in mixed result as any method of contraception there is risk of pregnancy. Modern form of birth control or contraceptive or antifertility are 70%-99% effective depending on the method chosen. For women or men who doesn't want to use modern method can prefer herbal contraceptives and reducing fertility would be better than no birth control. Some herbal contraceptives show cumulative effect in body and need to be taken at regular time intervals or during a period of time. Herbal contraceptive or antifertility also overcome some side effect that are caused by the modern method of contraceptive.

Keywords: Contraceptive, Herbal, Pregnancy.

Introduction

In the U.S., 158 million of the adult population use complementary medicines and according to the USA Commission for Alternative and Complementary medicines, US \$17 billion was spent on traditional remedies in 2000. In the UK, annual expenditure on medicine is US\$ 230 million. The global marketplace for flavouring medicines presently stands at over USA \$ sixty billion annually and is growing steady. Population explosion is that the greatest single drawback India is facing these days.[1] Modern drugs has provided many preventive and corrective ways of contraceptives none of that is extremely safe and while not any serious aspect effects.

*Correspondence
Rahul Solakhia
IEC school of Pharmacy,
IEC University,Baddi (H.P), India.
E-Mail: rahul.solakhia@gmail.com

Over population is one of the serious problems in the developing countries like India and that would be increased about 9.2 billion by the year 2050. The census of 2005 showed that the growth rate of population in India during the previous ten years was about 1.5%.[2] In annually around eighteen million folks are adding to our total population. This increment imposes an extra burden on the community and it is also one of the leading causes of poverty and pollution in developing countries.[3] Many countries have already banned the use of hormonal contraceptives because of its carcinogenic effects. The discovery of some flavouring contraceptives, safe and sure is the need of the hour. Herbal contraceptives were used even by the primitive folks of ancient civilizations to manage fertility and forestall gestation[4] Though, the conventional medicine has discovered some important antifertility agents (Contraceptive) for female, their popularity and utility among women is restricted due to some unwanted and troublesome effects. The common side effects include obesity, cholelithiasis, gastric

e-ISSN: 2590-3241, p-ISSN: 2590-325X

trouble and carcinoma of breast and cervix, asthma and venous thromboembolism. The medical persons ar in search of safe and active contraceptive agents of artificial or flavouring origin. Thorough review literature survey of ancient and trendy flavouring pharmacological medicine reveals that there are several plants having scientifically established anti-fertility activity. These plants could also be valuable supply of flavouring contraceptive for ladies. Now a days fertility control finds a great significance because of rapid population growth and needs a check on it. Plant product have attracted the eye of the many scientists as a primary supply of present fertility control agents thanks to their very little or no aspect effects numerous plant extracts are reported as antifertility agents. Although no prophylactic screening programs involving sizable amount of plants are rumored within the literature, scattered laboratory evidence exists suggesting this area as a fruitful one for development[5] The discovery of associate degree orally effective non-synthetic prophylactic agent, occurring free in nature could possibly be an acceptable answer to the question of population control. The World Health Organization steered that effective, locally available plants be used as substitutes for drugs. Since the population explosion is a leading cause of poverty and pollution in developing countries, they created a population control programmer, which includes studies of traditional medical practices. Fertility management is a problem of world and national public health concern. [6] Current methods of contraceptive result in an unacceptable rate of unintended pregnancies. Approximately five hundredth of all pregnancies are accidental at conception; five hundredth of these occur within the ninety four of sexually active couples UN agency report victimisation some technique of contraceptive method. Medicinal plants in India have been screened for contraceptive potential and anti-fertility effects, since the country has always been concerned about population explosion. Higher use of contraceptive ways may be a direct indicator of health, population, development and women's empowerment. [7] It also serves as a proxy measure to access the reproductive health services that are essential for meeting many of the millennium development goals, especially for those concerned with child mortality, maternal health, HIV/AIDS, and gender equality. The female contraceptive methods were always on higher priority and men willing to share in the responsibilities of family planning have fewer options of contraceptions which are effective, reversible, non-irritating and highly expectable. A survey conducted by UN agency showed that sixty one

of the males victimisation contraceptive were intended by issues of the feminine partner, as well as thirty fifth UN agency had toughened a contraceptive failure, or by the desire to share responsibility.

Herbal Contraception

Numerous herbs are used traditionally to cut back fertility, and trendy research project has confirmed anti-fertility effects in a minimum of a number of the herbs tested. [8] Herbal birth control might ne'er reach the amount of contraceptive protection because the pill, however it offers alternatives for girls World Health Organization have issue with trendy contraceptive choices or World Health Organization simply want to try a different way. Very little is thought regarding several of the herbs, or regarding long run facet effects or safety issues. Most herbalists I've spoken with do not suggest herbs for birth control, as a result of their potential irresponsibility. Michael Tierra wrote in his response to questions on flavouring birth control and abortion on his web site "I lived and explored communally with variety of girls flavouring ways for contraception or inducement discharge at among time period of its due time. Many herbal methods were tried with mixed results[9] People who don't seem to be fascinated by obtaining pregnant are typically not fascinated by mixed results." With any methodology of birth control, there's some risk of gestation. Each lady should decide abundant|what proportion|what quantity} of a risk is just too much. Most modern types of contraception are seventieth to ninety nine effective counting on the tactic chosen. For women World Health Organization cannot use trendy types of birth control, herbs can give alternatives, and reducing fertility would be higher than no contraception at Before experimenting with flavouring contraceptives, i feel it is vital to pay a while learning to inform, with accuracy, once you are fertile every cycle. Once ovulation occurs, menstruation should follow in about 14 days. [10] If you can identify when fertility passes each cycle, you'll know when to expect menstration - based on signals your body has given you, rather than an estimated guess (calendar methods). This way - you know if and when menstruation is late. The date organic process happens will vary from cycle to cycle, although we have a tendency to cycle terribly frequently, our bodies will do the surprising. There's not loads of data accessible on mistreatment herbs for birth control, but there are historical references with clues to what ancient women did, and the scientific community has published some studies, totally on animals, showing some of the herbs do seem to have contraceptive effects. There have conjointly been

informal studies wherever the herbs were tested by ladies for birth control. [11] If you are attempting any of those herbs, apprehend that you just are experimenting on yourself. Consider beforehand what you would do if the herbs were to fail. For those folks World Health Organization wish to attenuate the chance of obtaining pregnant, herbs might not be the most effective choice for our primary methodology of contraception. Each herb has its own way of being taken, some are taken daily, while others are used on an as needed bases, after potential exposure to sperm during a fertile time. Generally, herbs that are taken on a daily basis need some time to take effect, an alternative method of birth control should be used during the waiting period to provide protection. [12] So it's important to know how they are used, when to take them, and how much to use. I will provide the maximum amount data as I will, but for many of the herbs there's not a lot of information available. I've created pages for many of the herbs, you'll find links below with more information. If you decide on to use flavouring contraceptives you are doing thus at your own risk, make sure to follow any directions to the letter. Know what you will do if they fail. I'd be interested to know of any experimentations, your experiences add to our collective body of knowledge. I can be reached by email, and I love details!! Some may wonder why I have not experimented with these alternatives any more than I have, to put it quite simply, I'm at a point in my life where I'm not willing to take any chances of getting pregnant. My birth control (fertility awareness) works simply fine on behalf of me.[13] I believe ladies ought to comprehend all attainable choices and build the selection for themselves. Herbal contraceptives could be a catch all class for herbs that have associate anti-fertility result. There are many different ways in which herbs can impair fertility. Some herbs might have an effect on the ovary, while others act upon the uterus, affect normal hormone production or block certain hormones, and others we don't really understand their action, or how they got their reputation. Some herbs have the flexibility to interfere with implantation, these herbs can be taken on an as needed basis, and are useful as an

Daily Herbal Contraceptives

Some flavouring contraceptives have a additive result within the body, they need to be taken regularly (usually daily) to maintain the contraceptive effect. Often needing a amount of your time to ascertain effectiveness, thus a barrier methodology ought to be used. Examples are, wild yam and neem.[17-18]

e-ISSN: 2590-3241, p-ISSN: 2590-325X

Wild Yam

It is a good example of a typical herbal contraceptive, taken daily, needing a period of time to establish effectiveness, and mixed results reported.[19] The herbalists I even have spoken to but haven't got heaps of religion during this herb's ability to forestall gestation.Bridgette Mars did an off-the-cuff study (I ne'er did establish the details) that complete that the vine wasn't an efficient variety of birth control.[20] I've also received reports through the grapevine of women who used wild yam, I've heard of both success and failure, I've heard of women using it successfully for a time, then something happens and pregnancy occurs. Another chance to contemplate to extend wild yam's reliableness, and to bring your partner into the realm of birth control responsibility, recently, an oral herbal contraceptive for men has come to my attention. Again, I can not verify its effectiveness or safety, but, there has been successful human experimentation conducted in India[21]. And one final thought to assist increase wild yam's reliableness, is to ask your lover to withdraw before ejaculation. This way the amount of sperm cell discharged is significantly less or none, and if there's ever a slip up, you'll be covered.[22] It all depends on how much of a risk you are willing to take when choosing your method of contraception, it can't hurt to do everything possible to minimize the risk.[23]

Neem Oil

Neem oil is a tree from India, with numerous uses, used for just about anything and everything. Quite a little bit of research is obtainable concerning this herb, for both general uses as well as contraceptive uses. Most of the research has been conducted in India, the tree's native home. There are commercial preparations available that can be used for contraception for both men and women. For women it is used vaginally as a spermacide, and men use it orally as a daily contraceptive to induce temporary sterility. I can't vouch for its effectiveness or safety. I encourage you to do your own research.[24-25]

emergency contraceptive.[14-15]

possible avenues of actions.[16]

herbs that are found to interfere with traditional gamete

production, or mobility. Each herb is used in its own

way, so it's important to have some idea of how they

are used, or could be used. Let's further define the

There are some

e-ISSN: 2590-3241, p-ISSN: 2590-325X

Pomegranate (Punica Granatum)

A fruit used by ancient women to prevent conception. This is more for historical interest. Rudolf Fritz Weiss notes the seeds contain AN estrogen a dead ringer for the real endocrine [estrogen] and states dicot genus seeds square measure the most effective supply of plant estrogen to this point.[26]

Implantation Inhibitors

Some flavouring contraceptives have the flexibility to interfere with implantation, the particular impact within the body will vary from herb to herb, but the end result makes it troublesome for the egg to implant or maintain its grip on the female internal reproductive organ wall. Implantation occurs about 6 days after the egg has been fertilized. If the egg is unable to get a grip on the uterine wall, it cannot survive, it begins to break down, and menstruation will arrive as usual.[27-28]

Queen Anne's Lace Seeds (Daucus carota)

It also known as Wild Carrot, the seeds seem to have the best reputation for contraception. [29] Women from the chain to India have used the flower heads and mature seeds to forestall conception. This herb is in use nowadays, and has some documentation to it's effectiveness, both in scientific studies and through individuals who've used it. I tend to place a lot of religion during this herb than the other contraceptive herb that i do know on the brink of dateIt works best as a morning when kind contraceptive, the big advantage to this is that it can be used on an as needed basis. [30] The first dose taken at intervals eight hours of being exposed to sperm cell, followed by another dose or two as needed. It can also be used in tinture form, which elliminates the need to chew the seeds, which for those of us have tried it, know its pretty yucky. The use of herb as a tincture also elliminates the occassional symptoms of vaginal dryness.[31-32]

Rutin

This is found at local health food markets, it is also known as Vitamin P. Susun Weed writes it will be wont to stop gestation, when taken in tablet form in doses of at least 500 mg daily for several days preceding and following ovulation, or once taken when fertilizing intercourse and continue till menstruum begins.[33]

10. Neem Oil It has also been found to prevent implantation. Testing so far has involved rats; the implantation inhibitory effects were seen in as many as 10 days after fertilizing intercourse occurred, although it was most effective if used within 3 days of fertilizing intercourse. At this point, i actually don't have any plan what a secure human dose would be. Its more thoroughly researched uses include a spermacide and oral contraception for men.[34-35]

Conclusion

Population explosion is leading reason behind economic condition and pollution in developing countries. Rising human population throughout the planet a lot of notably in developing and underdeveloped countries has prejudicious effects on the life supporting system on earth, the chance of a good check on human fertility might presently be realized through biological means that. many potential approaches for induction of physiological condition are investigated over a protracted amount. seasoning contraceptives provide alternatives ladies|for ladies|for girls} UN agency have issues with or lack access to trendy contraceptives choices notably women living within the rural areas in developing nations with terribly high population like Republic of India, China, Africa (Nigeria) and East Pakistan. learning the efficiency and toxicity of native plants that are acknowledged for contraception within the folkloric drugs of those countries might generate larger confidence in and wider acceptance of seasoning contraceptives. However, the hunt for an orally active, safe and resultive plant preparation or its compounds is however to be required for fertility regulation thanks to incomplete inhibition of fertility or facet effect.

Reference

- 1. Thakur DS, Kumar P, Kujur A, Kumar P, Kumar R. Contribution of Male Contraception in World Population. J Pharm Sci & Res, 2(7), 2010, 384-93.
- 2. Dehghan MH, Martin T, Dehghanan R.Antifertility effect of Iranian neem seed alcoholic extract on epididymal sperm of mice. Iranian Journal of Reproductive Medicine, 3(2),2005, 83-89.
- **3.** Gupta RS, Sharma R. A review on medicinal plants exhibiting antifertility

- activity in males. Natural Product Radiance, 5(5), 2006, 389-410.
- **4.** Hoesla CE, Saadb F, Pöppela M, Altwein JE. Reversible, Non-Barrier Male Contraception: Status and Prospects. Eur Urol., 48(5), 2005,712-22.
- 5. Montaserti A, Pourheydar M, Khazaei M, Ghorbani R. Anti-fertility effects of Physalis alkekengi alcoholic extract in female rat. Iranian Journal of Reproductive Medicine, 5(1),2007, 13-16.
- 6. Mishra N, Joshi S, Tondon VL, Munjal A. Evaluation of Antifertility potential of aqueous extract of Bougainvillea spectabilis leaves in swiss albino mice. Int J Pharm Sci Drug Res, 1(1), 2009, 19-23.
- 7. Sayeed Mohammed Abu, Hossain A.B.M, Manirul, Mondol Abdul Majid and Islam M. Antifertility studies on ethanolic extract of Abrus precatorius on swiss male albino mice. International journal of pharmaceutical sciences and research, 3(1), 2012, 288-292.
- **8.** Dheeraj Ahirwar. Anti fertility activity of Acacia leucophploea. Scholars Research Library, 3(3),2011, 411-413.
- Satheesh Kumar B, Madhukar Rao M, Madhusudhan K, Krishna Reddy M, Prasad MSK. Isolation and evaluation of anti fertility activity of total alkaloids from leaves of Aegle marmelos in male albino rats. International Journal of Applied Biology and Pharmaceutical Technology, 2(3), 2011, 178-183.
- **10.** Haloi K, Kalita E and Kalit JC. Effects of methanolic root extract of Careya arborea Roxb on ovarian histology of albino mice. Nebio 2010; 1(1), 2010, 14-17.
- 11. Ashish Mishra, Saket Verma, Abhinav Prasoon Mishra. A Plant Review: Butea Monosperma (Lam.) luntze. Research journal of pharmaceutical Biological and Chemical Sciences, 3(1),2012,700-714.
- **12.** Samatha Jhamuna, Bhattacharya. Cissampelos pareira: a promising anti fertility agents. International Journal of Research in Ayurveda and Pharmacy, 2(2), 2011, 439-442.
- 13. Monica kachroo, Agrawal SS. Anti- implantation activity of different extract of the peels of Citrus medica, Linn. International Journal of Pharmtech Research, 3(1), 2011, 535-539.

- **14.** Amit Kumar Ghosh, Anup Kumar Das, Kajal Kumar Patra. Studies on antifertility effect of rhizome of Curcuma longa linn. Asian Journal of Pharmacy and Life Science, 1(4), 2011, 349-353.
- 15. Ramya R, Sivasakthi R, Senthilkumar C, Anudeepa J, Santhi N and Venkata Narayanan N. Preliminary phyto chemical and anti fertility Studies on Dodonea viscose Linn. Asian Journal Res. Pharm. Sci., 1(3), 2011, 77-79.
- 16. Abu Adakole Hyacinth, Uchendu Chukwuka Nwocha. Antifertility activity of aqueous ethanolic extract of Hymenocardia acida stems bark in female rats. Iranian Journal of Reproductive Medicine, 9(3), 2011, 217-222.
- 17. Shivabasavaiah, Krishna Ram, Pavana H, Ramyashree T, Ramya M, and Manjunath R. Anti fertility effects of Madhuca indica leaves in male swiss albino rats. Journal of Pharmacy Research, 4(2), 2011, 323-326.
- **18.** Sripriya S, Yuvaraj G, Nema RK, Madhan kumar V, Deecaraman M. Evaluation of antifertility activity from stem part of Ocimum gratissimum in acetone extracts. International Journal of Pharmaceutical and Clinical Research, 3(2), 2011, 41-44.
- **19.** Sheeja E, Joshi SB, Jain DC. Anti ovulatory and estrogenic activity of Plumbago rosea leaves in female albino rats. Indian Journal of Pharmacology, 41(6), 2011, 273-277.
- **20.** Bharat Mishra, Deshmukh AB, Anita patel, David Banji, Dharamveer. Investigation on antifertility activities of the fresh juice of Raphanus Sativus on experimental animals. Pharmacologyonline, 2, 2011, 430-437.
- 21. Mohd. Azeemuddin Mukhram, Shivakumar H, Viswanatha G.L, Rajesh S. Anti-fertility effect of flower extracts of Tabernaemontana divaricata in rats. Chinese Journal of Natural Medicines, 10(1), 2011, 0058 0062.
- 22. Surendra Kumar M, Rameswara Reddy, Manasa G, Vanaja P, Sirisha G, Astalakshmi N. Antifertility effect of Trachyspermum ammi (Linn) sprague fruits on male rats. International Journal of Pharmaceutical & Biological Archives, 2(2), 2011, 705-709.

- **23.** Abraham, M., Sarada Devi, N. and Sheela, R. (1979). Inhibiting effect of Jasmine flowers on lactation. Indian J Med Res 69, 88.
- **24.** Anjaria, J. V., Varia, M. R., Janakiraman, K. and Gulati, O. D. (1975). Studies on Leptadenia reticulate: lactogenic effects on rats. Indian J.Exp. Biol. 13, 448.
- **25.** Chandhoke, Nimmi and Gupta, Sudha (1978). Estrogenic activity of DQ 1 A steroidal lactone— isolated from Datura quercifolia. Indian J. Exp. Biol. 16, 1978, 648.
- **26.** Chaudhury, R. R. and Hag, M. (1980 a). Review of plants screened for Anti fertility activity 1. Bull Medico Ethno Bot Res. 1 (3), 408.
- 27. Chaudhury, R. R. and Hag, M. (1980 b). Review of plants screened for Antifertility activity II. Bull Medico Ethno Bot Res 1 (3), 420.
- **28.** Das, R. P. (1980). Effect of Papaya seed on the genital organs and fertility of male rats. Indian J. Exp. Biol. 18, 408.
- 29. Deshpande, V. Y., Medulkar, K. N. and Sadre, N. L. (1980). Male antifertility activity of Azadirachta indica in mice. J. Postgraduate Med.26, 167.
- **30.** Devi, Sathi, and Singh Shamer (1978). Teratogenic and embryotoxic effect of papain in rat. Indian J Med Res, 67, 499.

- **31.** Devi, Sathi, and Singh, Shamer (1979). Maternal administration of papain and its effect on the brain of rat fetuses. Indian J. Med. Res. 69, 671.
- **32.** Dixit, V. P. (1977a). Effects of Malva viscus conzattii Greenm flower extract on testicular function of the house rat Rattus rattus. Refescens and the gerbil Meriones hurrianae Jerdon: a biochemical study. Indian J. Exp. Biol, 15, 506.
- **33.** Dixit, V.P (1977b). rffects of chronically administred malva viscus flower extract on the female genital tract of gerbil meriones hurrianae jerdon: Inian JExp. Bilol. 15,650.
- **34.** Dixit, V. P., Jain H. C., Verma, O. P. and Sharma, A. N. (1977). Effects of cannabis extract on the testicular function of the total Bufo andersonii Boulenger. Indian J. Exp. Biol. 15, 555.
- **35.** Bhardwaj S, Verma R, Gupta J., Challanges and Future Prospective of Herbal Medicines. International Research in Medical and Health Sciences.2018;1(1):12-15.