

# Can Plant Product be Substitute for Artificial Oral Contraceptive Pills?

Kadam Asha<sup>1</sup> and Gaykar Balasaheb<sup>2</sup>

<sup>1</sup>Department of Botany, Dada Patil Mahavidyalaya, Karjat, Ahmednagar, India

<sup>2</sup>Department of Botany, Ahmednagar College, Ahmednagar, India

## Abstract

Contraceptive methods mean birth control and fertility control methods or devices which used to prevent pregnancy. There are many categories of birth control methods but some having negative influence or risks and some safest and healthiest options. In the present study, we surveyed 269 women from Ahmednagar region and we found that among the 269 women, 179 women were used artificial contraceptives and rest of the women were not used any type of contraceptives. According to the feedback of these women only some having satisfaction and remaining most of women are not satisfactory with these contraceptives, because of high risk of cervical cancer, blood clots, cycle irregularities, irregular bleeding, loss of sexual function, vaginal infection etc. Hence according to survey, we analyse that many women turn to birth control pills because they are not aware that there are safer options available.

**Keywords:** Medicinal plants • Herbs • Artificial oral contraceptive pills • Environmental friendly

## Introduction

Historically, a contraceptive has meant a device or hormone that prevents conception, or fertilization. In other words, a contraceptive has been seen as an agent that prevents the union of egg and sperm. Mostly two methods are used for contraception i.e. Artificial and Natural.

Artificial contraceptive means any product, procedure or practice that is used artificial or unnatural means to prevent pregnancy. In these methods synthetic hormones are used, whose adverse health effects have been well documented over the past 30 years [1]. Typically, hormonal contraceptives work by releasing estrogen and progesterin into body, preventing ovaries from releasing eggs. Spermicides are chemicals that kill or disable sperm so that it cannot fertilize an egg and cause pregnancy. Spermicides come in many different forms like foam, jelly, cream, film and suppositories [2].

Natural contraceptives mean natural way to prevent pregnancy i.e. they are not mechanical and not result of hormonal manipulation. There are two routes to take when using natural contraceptives i.e. barrier methods and natural family planning methods. In general, people are more familiar with barrier methods than with natural methods which are more complex [3].

Barrier methods work by physically preventing the sperm from reaching the egg.

In today's era, use of contraceptive is the solution, which is being discovered by the medicinal sciences, with the help of using these contraceptives couples can maintain their sexual relations, as a physical need and take control over the birth control [4]. Contraceptive options for couples could be used by three ways viz. male contraceptive, female contraceptive and as abortifacient [5].

Herbalism has a long tradition of use outside of conventional medicine [6]. It's becoming more main stream as improvements in analysis and quality control along with advances in clinical research show the value of herbal medicine in the treating and preventing various diseases [7]. Human beings have also used herbs since historic time to control fertility. Naturally occurring substances are chemicals, but some distinguish them from

synthetic substances and consider them "natural". Herbs and substances may be ingested, to interfere with ovulation or implantation. Some are used to encourage menstruation [8]. Contraceptive plants are used for birth control or fertility control and these plants prevent pregnancy, through one of several methods [9].

At present, for the study natural herbal contraception we surveyed women from Ahmednagar region for the focus of how many women using natural contraceptives or how many women using artificial contraceptives. Various plant products have been used by women since the beginning of time in an attempt to control their fertility. The development of new fertility regulating drugs from medicinal plants is an important because from times immemorial humans have relied on plants and their products as sources of drugs and therapeutic agents. Also, in ancient times, people limited the size of their families. Since the major responsibilities of pregnancy, birth and child rearing fell on women, they found methods for controlling fertility and aborting unwanted children, they have passed down this knowledge as an oral tradition that survives worldwide.

According to Susruta Samhita, the seeds of the plant Pippalayadi Vati have been used as an antifertility agent since ancient time. In 1963, the resin from asafetida (*Ferula assa-foetida*) was found to be effective in humans as a contraceptive and for inducing early abortion. Besides silphium and asafoetida, other plants were recognized as having both contraceptive and abortifacient properties by ancient women. Hippocrates "the father of medicine" stated the seeds of Queen Anne's lace, or wild carrot, when taken orally both prevented and terminated pregnancy and recommended their use.

Some herbal contraceptives are meant to be taken on a daily basis due to the cumulative effect they have on the in order to uphold the effects of contraception. Such examples include wild yam and neem [10]. Wild yam is a tested and tried great herbal contraceptive that is a folk remedy and as a daily intake it speeds the effectiveness of contraception [11]. Each herb has varied effect on the body and no two herbs are alike in their abilities to prevent conception [12].

There are numerous ways in which herbs are used to disrupt fertility.

\*Corresponding Author: Kadam Asha, Department of Botany, Dada Patil Mahavidyalaya, Karjat, Ahmednagar, India ; E-mail: ashakadam16@gmail.com

**Copyright:** © 2021 Asha K, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited.

**Received:** February 20, 2021; **Accepted:** March 08, 2021 ; **Published:** March 15, 2021

Some herbal preparations possess properties that cause the ovary to be affected, while some others impress upon the uterus or sometimes block and even disturb the production of hormones [13]. There are some herbal contraceptives that have the property to intervene with implantation and such herbs are consumed as an emergency contraceptive [14].

The knowledge of medicinal plants used by the people is popular in various cultures and traditions. For centuries herbal options and practices have been conducted with the goal of preventing pregnancy [15].

## Materials and Methods

### Sample

Sample is collected from Nagar taluka. Women age range 20-45 years married and have been used one or the other kind of contraceptive have been considered as a sample.

### Procedure of data collection

The study investigated how many women using contraceptives, for preventing pregnancy-related cases and general illness. Self made questionnaire has been used for the purpose of data collection. Repeated questions were omitted. The final form of questionnaire is being used for data collection. Focus group discussions, key informants, participant observations and questionnaire interviews were employed. Questionnaire interviews were conducted by female interviewers in the home of sampled persons. Questionnaire presents the proportion of sexually experienced women aged 20-45 who have ever used various contraception methods in Ahmednagar region.

Data from focus group discussions and key informants (through questionnaire) was first analyzed manually by sorting how many women used contraceptives or not. Out of them 179 using contraceptives and rest of them are not using any type of contraceptives.

### Proposed statistical techniques

Information for questionnaires that used contraceptives was analyzed using statistical methods like tallies, frequencies has been used to organize the data. A total 269 respondents were interviewed. Tests such as mean comparison, correlation is been used to analysed the data.

### Data analysis and Interpretation

The data analyzed after the compilation of it into tabular form.

The safeness of contraceptives is asked to the respondents themselves. Three options have been given Yes, No and can't say.

According to our study, 59.2 percent of respondents are saying that, the available contraceptives are not safe. Whereas 2.8 percent respondents are saying that they are not having any positive or negative opinion.

If the respondents feel that the available contraceptives are unsafe the in what capacities is the question. Hence, three parameters have been set, (a) available contraceptives effects on physical health (b) available contraceptives effects on mental health and (c) available contraceptives may affect on further conception.

The analysis of the data says that, 55.9 percent of the respondents saying available contraceptives effect on physical health, 51.4 percent respondents say that available contraceptives effect on mental health whereas

46.9 percent effect on further conception. In fact, 46.9 percent are saying it shows effect whereas 46.4 percent are saying it do not effect on further conception.

Looking at the analysis of above Table 1 says that, in respondent's perception available medicines are not safe pertaining to its effects on

physical and mental health. Also, there is big dichotomy on whether these contraceptives will effect on further conception. Hence respondents have been asked in their perception which discipline of medical has capacity to give safe contraceptives. The analysis is as given table.

**Table 1.** Whether contraceptives available in market are safe.

	Frequency	Percent	9
Valid	Yes	68	38
	No	106	59.2
	Can't Say	5	2.8
Total	179	100	

The analysis given in above Table 2 says that, 65.4 percent respondents feel that Ayurveda can give safe contraceptives. Herbal is the second trusted field i.e. 20.1 percent to give safe contraceptives.

**Table 2.** Effects of contraceptives on physical health, mental health and further conception.

	Effect of Contraceptive on Physical health	Effect of Contraceptive on Mental Health	Effect of Contraceptive on Further Conception
Yes	55.9	51.4	46.9
No	41.9	46.9	46.4
Can't Say	2.2	1.7	6.7
Total	100	100	100

## Result and Discussion

In the present study, most of the respondents preferred Ayurvedic and Herbal discipline of medicine which can give safe contraceptives than any other disciplines. But now a day's mostly women use artificial contraceptives because there is a no awareness of alternative method and availability of safer options for instance. According to the feedback of these women only some having satisfaction and remaining most of women are not satisfactory with these contraceptives, because of high risk of cervical cancer, blood clots, cycle irregularities, irregular bleeding, loss of sexual function, vaginal infection etc.

On the basis of given data, there is analyze that many women turn to birth control pills because they are not aware that there are safer herbal options available. Assurance of safety, quality of medicinal plants and plant preparations are key issues, to be addressed Kadam A. All hence there is need for searching suitable product from indigenous medicinal plants that could be effectively used in place of synthetic hormonal contraceptives.

## Conclusion

In conclusion future research effort should be directed towards the safety, quality and efficiency of contraceptive plants which are natural alternatives to hormonal contraceptives. Due to natural alternatives, contraception could bring more benefits to more people at less cost than any other single technology.

## Acknowledgement

Authors are thankful to Principal and Head, Department of Botany Dada Patil Mahavidyalaya, Karjat, Ahmednagar for seed money support during the study. Also, the authors are thankful to Principal, Ahmednagar College, and Ahmednagar.

## References

1. Absar, AQ, Dhirendra BS, Padgilwar SS. "Herbal options for Contraception: Review." *Pharmacog Magaine* 8(2006):204-215.
2. Kadam ,A and Gaykar B. "Study of some traditional contraceptive plants." *savitribai Phule Pune university* , Pune (2017).
3. Chaudhury, R. "The quest for herbal contraceptives." *natl Med J India* 6(2004):199-201.
4. Duke, JA. "Handbook of medicinal herbs". *CrC Press* (1988).
5. Dureshi, AA, Saghai OB, Padgilwar SS. "Herbal option for contraception." *Ind sci Abstr* 28 (2007):9-16.
6. Farnsworth, Bingel, Cordel, and Crane, et al. "Potential value of plants as source of new antifertility agents I." *J Pharm sci* 64 (1975):535-598.
7. Gediya, S. "Herbal plants used as contraceptives". *IJCP* 2(2011):52.
8. Glasier, A and Alisa G. "Handbook of family planning and reproductive healthcare." *Elsevier* (2008).
9. Kaur, Sharma, Kumar and Kharb. "Rising trends towards Herbal contraceptives." *J nat Prod Plants res* 1(2011):5-12.
10. Martinez, GM, Daniels K, Chandra A. "Fertility of men and women aged 15–44 years in the United States: National survey of family growth, 2006–2010." *nat health stat reports* 51(2011).
11. Moon, D. "Contraception information: spermicides". *Moon Dragon Birthing services* (1997).
12. Mosher, WD, Martine GM, Chandra A and Abma JC, et al. "Use of contraception and use of family planning services in the united states". *CDC Division of vital statistics* (2004).
13. Pradhan, DK, Mishra MN, Mishra A and Panda AK, et al. "Comprehensive review of plants used as contraceptives". *Int J Pharm sci res* 4(2004):148-155.
14. Thomas, L L, David AW, Williams L and Wilkins. "Foye's principles of medicinal chemistry". *6th Edition* (2008).

**How to cite this article:** Asha, Kadam, Gaykar Balasaheb. "Can Plant Product be Substitute for Artificial Oral Contraceptive Pills?." *J Environ Anal Toxicol J* 11 (2021): 110