



## Review Article

### Herbal Abortifacient Drugs: A Review

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#### ABSTRACT

Unwanted pregnancy is one of the major fertility as well as social issues of all times. Unwanted and unexpected pregnancies are often gotten rid of by painful, costly and embarrassing surgical operations. Certain natural herbs possess abortifacient properties that may help one to get rid of their undesired pregnancy without any sort of surgery. Contraception means to prevent pregnancy and Abortion means ending of pregnancy. The use of plants as abortifacient and it is practiced by older time physicians in India. Because of fewer side effects of herbal drugs and natural herbs possess miraculous powers to compete with surgical abortion. The aim of this review is to study the abortifacient activity of herbal drugs.

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## Introduction

Fertility issues is become a major health problem throughout the world nowadays along with the highly growing population (Shweta G., 2011). Ethnobotany is a new field which deals with medicinal plants and their different activities. These medicinal plants play a major role in human life. Nearly 80% of the world population still believes in the use of traditional medicine for their health issues, in which plant extract is mainly involved (Pradhan, 2012). The term "abortion" actually refers to any premature expulsion of a human foetus, whether artificially induced, as in a surgical or chemical abortion or

naturally spontaneous, as in a miscarriage (aboutabostion, 2013). The population problem is one of the biggest problems facing the country, with its effect on all aspects of development, especially employment, housing, health care ,education, sanitation and environment (Thakur, 2010). In today world scenario, population control is the need . Every country has limited resources, which are decreasing at a fast rate. If population is not controlled, the quality of life is also affected (Agarwal, 2010). An abortifacient (Latin: that which will cause a miscarriage) is a substance that induces abortion (Wikipedia, 2013). In case of medical abortion techniques it is highly

complicated and the sideeffects are high bleeding, nausea, fever, diarrhoea, vomiting, headache, fatigue, hot flashes, and abdominal cramping and pain (Abortion web, 2013).

### What is the Need of Abortion?

Abortion is needed to save the mother's life and to prevent the birth of defective child. The need for abortion was divided into two categories i.e. First to save the mother's life and second is to prevent the birth of a defective child (Pregnancy.lovetoknow, 2013).

The chemical medicines possess various side effects like obesity, cholestasis, gastric trouble and cancer of breast and cervix, asthma and thromboembolism which decrease their popularity and use among women. The hormonal contraceptives may have carcinogenic effects. Therefore, nowadays, plant products points the attention of many scientists as a primary source of naturally occurring fertility regulating agents such as herbs or herbal drugs because of their no or little side effects (Bhowmik, 2013).

Women across the world prefer to use herbal abortifacients rather than other drugs or surgical procedure due to poverty, as well as the safety profile of herbs. Women in India and various other countries prefer herbal medication for this purpose because abortion is considered as illegal in various parts of the world (Jager, 2011).

We have turned towards nature to solve a number of problems we come across in our daily life, and nature has served us well (Shah, 2009). Herbal abortifacients are said to be most effective when used in the first trimester. Otherwise it is of no use and preferred surgical procedures (Lalitkumar, 2006; D. Rohit, 2014). Herbs used for their abortive properties, therefore retained connections with more "acceptable" reasons for flushing the womb, such as for encouraging menstruation or easing birth. This use for the identification of the most commonly utilised herbal abortifacients (Shakespeare, 1997).

India is first from the countries in the world which adopted an official family planning programme, as early as 1950. Even in ancient

times, people have limited the size of their families. Since the major responsibilities of pregnancy, birth, and child rearing fell on women, they found different methods for controlling fertility and aborting unwanted children (Moudgal, 1984). Nearly 80% of the world populations rely on traditional medicines for primary healthcare, most of which involve the use of plant extracts for treatment (Sandhya B., 2006).

Plants that have contraceptive and abortifacient activities may act through rapid discharge of the fertilized ova from the fallopian tube and foetal abortion cause due to lack of nutrients supply to the uterus and the embryo, inhibition of implantation due to a disturbance in oestrogen - progesterone balance and also on the male side through its effect on sperm count (Ciganda, 2003; Kaunitz, 1998; Noumi, 2001). Although surgical procedures are practiced more than a natural abortion can prove to be cost effective as well as private (Anwasha, 2015). If herbal medicines used in proper dose with proper precautions, they can save people from the embarrassment (Anwasha, 2013) of having a surgical procedure to eliminate unwanted pregnancies as only one person is involved and no one else (Brigitte, 2009).

### Advantages use of herbal medicine

**1. Risk of side effects reduced-** Most herbal medicines are well tolerated by the patient, Herbs typically have less side effects than traditional medicine and may be safer to use over time.

**2. Cost Effective-** Another advantage to herbal medicine is cost. Herbs cost much less than prescription medications. Herbs tend to be inexpensive compared to chemical drugs.

**3. Easy availability-** Yet another advantage of herbal medicines is their availability. In some remote parts of the world, herbs may be the only treatment available to the majority of people and herbal medicines are easily available (herbs.lovetoknow, 2013).

Rue (*Ruta graveolens*) is also used as a potent Abortifacient (Shweta G., 2011; Brigitte, 2015; Cheung, 2010). Rue decreased blood supply to the endometrium, which results in the

insufficiency of uterine lining to provide sufficient nutrients to the fertilized egg (Shah, 2009; Cheung, 2010). Unripe papaya is also used to terminate pregnancy. It interferes with progesterone and causes abortion. (Cheung, 2010; Shende, 2013). Dried cotton roots (*Gossypium*) are secret the oxytocin, which is a hormone that initiate uterine contractions. Induction of this hormone causes miscarriage (Anwasha, 2013; Cheung, 2010). Mugwort plant is also considered as an abortifacient (Brigitte, 2009; Cheung, 2010). But it should be used with caution and with Doctor's preference because its overdose may cause renal failure. Dong quai (*Angelica sinensis*) is another abortifacient herb (Brigitte, 2009; Cheung, 2010; Dong Quai, 2013). This works by increasing uterine contractions (Anwasha, 2013; Cheung, 2010). Wild carrot (Queen Anne's lace) and its seeds are also used as a contraceptive for a very long time (Shweta G., 2011; Cheung, 2010; Donahue, 2009). This

theory is also described by Hippocrates (Donahue, 2009).

It works by blocking synthesis of progesterone, which disrupts implantation (Cheung, 2010). Various studies have shown that Vitamin C is also used as a potent abortifacient (Brigitte, 2009). Vitamin C containing fruits such as pineapple are also said to induce abortion by contractions of uterine (Anwasha, 2013; Cheung, 2010). Asafoetida is also reported as an abortifacient. In addition to these herbs aerial parts of *Guanicum officinale* and leaves of *Ocimum sanctum* are also considered as abortifacient herbs (Shweta G., 2011).

Green tea is also used as a natural abortive drug. Too much consumption of green tea causes fertility problems (D. Rohit, 2014). In the table 1 the list of abortifacient plants is discussed and their usage without chemicals has no side effects (Mitra, 2009).

**Table 1: List of Abortifacient Herbal Drugs**

Local Name	Biological Name	Family	Parts use	Method of use/Action
Ankol	<i>Alangium salviifolium</i>	Alangiaceae	Stem bark	Abortifacient, anti-implantation
Jangali-arandi	<i>Jatropha curus</i>	Euphorbiaceae	Fruits	Decrease sperm motility and decrease sperm count, abortifacient
Tulsi	<i>Ocimum sanctum</i>	Labiatae	Leaves	Late abortifacient, anti-implantation
Cotton root	<i>Gossypium hirsutum</i>	Malvaceae	Bark	Abortifacient (Shweta G., 2011).
Karingali	<i>Acacia catechu (L.f.) Willd.</i>	Fabaceae	Bark	3-5 ml of bark juice is taken orally for the first three months for Abortifacient.
Kannara	<i>Ananas comosus(L).Merr .</i>	Bromeliaceae	Fruit	Ripened fruit is used to induce abortion.
Kattumuthir	<i>Dolichos trilobus</i>	Fabaceae	Whole plant	Whole plant juice is used to induce abortion in the first three months for abortion.
Seethapazham	<i>Annona reticulata L.</i>	Annonaceae	Seeds	Seed paste is given orally on empty stomach for 3-5 days for abortion
Rajamally	<i>Caesalpinia pulcherrima (L.) Sw</i>	Fabaceae	Bark	Bark juice (2ml)is administered orally on empty stomach for the first three

				months
Ana chunda	<i>Solanum torvum Sw.</i>	Solanaceae	Leaf	3-5 ml leaf extract is given orally for 5 days which causes abortion.
Kunch	<i>Abrus precatorius</i>	Fabaceae	Seeds	Fresh seeds powder mixed with glass of like warm water at early morning in empty stomach for abortion.
Pavakka	<i>Momordica charantia L.</i>	Cucurbitaceae	Raw fruits	Fruit juice is given orally twice a day for 5 days on the first three months
Koduveli	<i>Plumbago zeylanica L.</i>	Plumbaginaceae	Root	3-5 ml of root paste is taken orally to induced abortion
Anaras	<i>Ananas cosmosus Linn</i>	Bromeliaceae	Leaves	10 gm of leaves made into paste with 7 black pepper seeds and it is used for abortion.
Jaba	<i>Hibiscus rosa-sinensis Linn</i>	Malvaceae	Root bark	Inner portion of the root bark 100gm is made into paste along with seeds of black pepper. This paste is mix up with a glass of water and given as abortifacient
Lal cheetah	<i>Plumbago rosea Linn</i>	Plumbaginaceae	Root	A candle of about 9 cm is prepared from the root paste of this plant which is kept inside overnight to induced abortion
Bhela	<i>Semecarpusan acardium Linn</i>	Anacardiaceae	Root bark	The fresh root bark of about 20g is made into a paste and two small pills are prepared from this paste and are kept inside overnight (Mitra, 2009).

### Conclusion

In whole world abortion is the main issue. In this article we discussed abortifacient herbal drugs. Abortion is done with allopathic/Surgery or using herbal plants. Natural herbs possess high powers to compete with surgical abortion methods. Herbal abortion is a better option as compared to surgical abortion. Herbal drugs are natural, low cost, fewer side effects than allopathic techniques. Because allopathic techniques have more pain and side effects. Allopathic techniques have effective and fast effects but it has more risk .So that we

discussed abortifacient herbal drugs in this review article.

### Conflicts of Interests

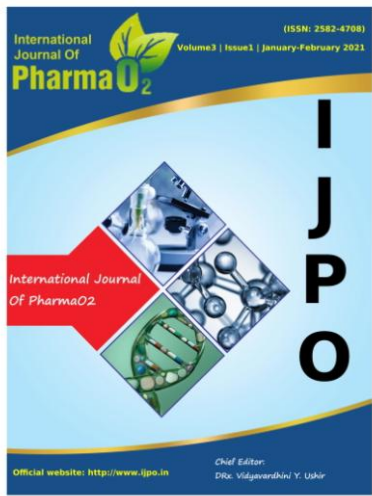
Authors do not have any conflicts of interest with the publication of the manuscript.

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