International Journal of Innovative Pharmaceutical Sciences and Research
www.ijipsr.com

A REVIEW OF PLANTS USED AS CONTRACEPTIVES

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Abstract
This review presents information gathered on scientifically proved medicinal plants used for anti-fertility activity. This study provides the information on botanical name, family, parts used, and common name. In spite of rapid progress and spread of modern medicine and surgery, faith in and popularity of traditional methods has not decreased. There are a large number of studies which supports the anti-fertility effects of traditional herbal medicines. The aim of this review is to focus the work on anti-fertility of herbal medicines. This article may help investigators to identify medicinal plants responsible for anti-fertility activity.

Keywords: Anti-fertility plants, traditional herbal medicines, estrogenic activity and botanical name.

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INTRODUCTION

The population problem is one of the biggest problems facing the country, with its inevitable consequences on all aspects of development, especially employment, housing, education, health care, sanitation and environment. According to U.S. Census Bureau estimates, world population hit the six billion in June 1999. This figure is over 3.5 times the size of human population at the beginning of the 20th century. The time required for global population to grow from 5 to 6 billion, which took 12 years was shorter than the interval between any of the previous billion. In 2005 G.C., world population is estimated to be 6.5 billion. This number is expected to increase by 2.5 billion over the next 45 years, 6.5 billion to 9.1 billion in 2050. Today, 95 per cent of all population growth is absorbed by the developing world and 5 per cent by the developed world [1]. The World Health Organization (WHO) has set up a Task Force on Plant Research for fertility regulation with an objective to find new orally active non-steroidal contraceptive compounds. Various medicinal plant extracts have been tested for their anti-fertility activity both in male and female. Some of these plants had spermicidal and altered hormone levels. It is necessary to use biologically active botanical substances or fertility-regulating agents of plant origin which are eco-friendly e average birth per woman is 6.14 and the contraceptive prevalence is 8.1 percent [2,3]. Contraception is literally the prevention of conception, but generally is taken to mean the prevention of pregnancy. Family planning has been promoted through several methods of contraception, like contraceptive pills, Copper-T, Diaphragm Tubectomy, Condoms, and coitus interrupts. These methods are mostly female oriented. Contraceptive pills contain usually female sex hormone like estrogen, progesterone or their derivatives single or together. Novid was the first “pill” approved by FDA for use as contraceptive agent in the USA in 1959. But unfortunately these pills develop some unwanted effects like Hypertension, obesity, dysmenorrheal, vomiting, cardiovascular disorders and carcinoma of breast and uterus. So these pills are not safe for long term use. Various measures have been taken to minimize the side effects of these pills but there is little success. Due to serious adverse effects produced by synthetic steroidal contraceptives, attention has now been focused on indigenous plants for possible contraceptive effect. Although contraceptives containing estrogen and progesterone are effective and popular, the risks associated to the drugs have triggered the need to develop newer molecules from medicinal plants. From the advancement of reproductive biomedicine, several hormonal contraceptive pills have been developed but no one is free from different side effects. For this purpose, the World

Health Organization (WHO) has constituted a population control programme, which includes studies having traditional medical practices. At present global attempt has been taken to search out the effect of herbal product for contraceptive purposes [4, 5]. The review of literature in this regard has included plants having folkloric reputations and those plant extracts which have shown to be active in animals as well as in humans as antifertility drugs at various stages of pregnancy like estrogenic agents, uterine stimulants, abortifacients, anti implantation effects, Abortifacient activity, Contraception activity etc. Search or survey of medicinal folklore that to in relation to birth control or contraception in particular is a herculian task [6].

Some medicinal plants having antifertility activity below the tables:

Table 1: Medicinal Plants having Antiimplantation activity

SL No	Common Name	Botanical Name	Family	Parts Used	References
01	Barna and Varuna	Crataera nurvala	Capparidaceae	Stem and Bark	18
02	Somjava / Jewels of opar	Talinum Paniculatum	Dioscoreaceae	Root and Leaf	14
03	Lasura	Cordia dichotoma	Boraginaceae	Bark	26
04	Desert Horse Purslane	Trianthema portulacastrum	Aizoaceae	Stem Leaf	27
05	Wood Sorrel	Oxalis corniculata	Oxalidaceae	Whole Plants	14
06	Nag Champa	Artabotrys odoratissimus	Annonaceae	Leaf	28
07	Kaila Spati	Couroupta guiancensis	Lecythidaceae	Bark and Flower	28
08	Moss Rose / Pursley	Portulaca oleracea	Portulaceae	Aerial Parts	29
09	Jiwanti / Dodi	Leptadenia reticulate	Asclepia daceae	Whole Plants	30
10	Haldi	Curcuma aromatica	Zingiberaceae	Rhizome	14
11	Banda	Dendrophthoe falcatae	Loranthaceae	Aerial Parts	4
12	Nata Karanja	Caesalpinia bondue	Caesalpiniaceae	Root and Bark	31
13	Golden Shower	Cassia fistula	Caesalpiniaceae	Seeds	18
14	Calliandra brevipes	Derris brevipes	Papillionaceae	Root	4
15	Water Willow	Justicia simplex	Acanthaceae	Root	21

Table 2: Medicinal plants having Abortifacient activity

SL No	Common Name	Botanical Name	Family	Parts Used	References
01	Indian Tree of Heaven	Ailanthus excels	Simaroubaceae	Stem Bark	18
02	Hopbush	Dodonea Viscosa	Sapindaceae	Aerial Parts	32
03	Aaghada	Achyarnthes aspera	Amaranthaceae	Root	14
04	Betel Nut	Areca catechu	Arecaceae	Nut	33
05	Danti	Jatropha curcas	Euphorbiaceae	Fruit	4
06	Pursley	Portulaca oleracea	Portulaceae	Aerial Parts	29
07	Desert Hors Purslane	Trianthema portulacastrum	Aizoaceae	Stem, Leaves, Roots	27
08	Common Rue	Ruta graveolens	Rutaceae	Aerial Parts	14
09	Calliandra brevipes	Derris brevipes	Papillionaceae	Root	4

Table 3: Medicinal Plants having Contraception activity

SL No	Common Name	Botanical Name	Family	Parts Used	References
01	Desert Date	Balanites roxburghii	Zygophyllaceae	Fruits	14
02	Neem	Azadirachta indica	Meliaceae	Seed	14
03	Common Night Glory	Rivea hypocrateriformis	Convolvulaceae	Aerial Parts	18
04	Malai Vembu	Melia azedarach	Meliaceae	Aerial Parts	18
05	Danti	Jatropha curcas	Euphorbiaceae	Fruits	4
06	Common Rue	Ruta graveolens	Rutaceae	Aerial Parts	14
07	Long Piper	Piper longum	Piperaceae	Seed	18,27
08	Pudina	Mentha arevensis	Lamiaceae	Leaf	5
09	Bilva	Aegle Marmelos	Rutaceae	Leaf	18,12
10	Brahmi	Bacopa monnieri	Scrophulariaceae	Plant	18

Table 4: Medicinal Plants having Antiovalatory Activity

SL No.	Common Name	Botanical Name	Family	Parts Used	References
01	Betel Nut	Areca catechu	Arecaceae	Nut	33
02	Dhak ki-be	Rivea hypocrateriformis	Convolvulaceae	Aerial Parts	18

Table 5: Medicinal Plants having Estrogenic Activity

SL No.	Common Name	Botanical Name	Family	Parts Used	References
01	Desert Date	Balanites roxburghii	Zygophyllaceae	Fruit	14
02	Jiwanti / Dodi	Leptadenia reticulata	Aselepiadaceae	Whole Plants	30
03	Fenzl	Momordica cymbalaria	Cucurbitaceae	Root	14
04	Ambushi	Oxalis corniculata	Oxalidaceae	Whole Plant	14
05	Calliandra brevipes	Derris brevipes	Papillioraceae	Root	4

06	Hausa	Spondias mombin	Anacardiaceae	Leaf	8
07	Chinarose	Hibiscus rosa sinensis	Malvaceae	Root	4
08	Pala indigo	Wrightia tinetoria	Apocynaceae	Stem Bark	7
09	Sodom Apple	Calotropis procerra	Asclepradaceae	Root	34

Table 6: Medicinal Plants having Anti-Estrogenic Activity

SL No.	Common Name	Botanical Name	Family	Parts Used	References
01	Callindra brevipes	Derris brevipes	Papillioraceae	Root	4
02	Aaghada	Achyranthes aspera	Amarantraceae	Root	14
03	Betel Pepper	Piper betel	Piperaceae	Petiol	14
04	Fenugreek	Trigonellafoenum gracum	Fabaceae	Seed	14
05	Lotus	Nelumbo Nucifera	Nymphacacea	Seed	20
06	Honeysuckle Mistletoe	Dendrophthoe falcate	Loranthaceae	Aerial Parts	4
07	Ambusi	Oxalis corniculata	Oxalidaceae	Whole Plant	14
08	Nata Karanja	Caesalpinia bonduc	Caesalpiniaceae	Root and Bark	31

CONCLUSION

The knowledge of medicinal plants used by the people is popular in various cultures and traditions. However, taking herbal contraceptives may risk exposure to health concerns, not always 100% effective, and should not be taken with prescribed medication or having an existing health problem.

Taking herbal contraceptives long term may or may not cause a health concerns. Despite the availability of various contraceptives modalities, one of the most challenging pursuits in the realm of pharmaceutical and medical sciences is the search for newer, most potent, additionally safe and less expensive methods that require infrequent and self administration and should have long lasting but complete antifertility effect.

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