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Medicinal Plants with Antifertility Activity-An Overview

By Stalin.C, Vivekanandan.K & Bhavya.E
Rao's Pharmacy College, Nellore, Andhra Pradesh, India

Abstract - Medicinal plants, is a common word which can utter in every one's mouth that are helpful in treating many diseases which can't be done by even allopathic medicine. Among those the birth control and at the same time increasing the fertility in human beings are both become major problems now a days. This review presents updated information gathered on scientifically proved medicinal plants used for anti-fertility activity. This study provides the information on botanical name, family, parts used, solvents used and their chemical constituents present in plants. 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 highlight the work on anti-fertility of plant origin. The present paper also involves various plant drugs and their bioactive extracts involved in anti-fertility mechanism. This article may help investigators to identify medicinal plants responsible for anti-fertility activity.

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Medicinal Plants with Antifertility Activity-An Overview

Stalin.C[α], Vivekanandan.K[α] & Bhavya.E[α]

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I. Introduction

Ethanobotany is the new branch which deals the medicinal plants and their activities. The applications of this field are enormous in regular life. Controlling the birth rate in India is the major problem; at the same time some parents are unable to have babies, for that they are preferring fertility centers. To cope these two types of problems now natural medicine took the time to emphasize without technical apparatus involvement the birth may control through contraception (herbal contraception) and also can have babies through natural medicine intake.

There are several other articles, journals and references which have been discussed about the antifertility and profertility individually. But this review article shows the both sections including some pharmacological activities. 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. In the case of Ethiopia total population is estimated to be 74.2 million in 2005 with current growth rate of 2.9 per cent per year. The average birth per woman is 6.14 and the contraceptive prevalence is 8.1 percent [1].

Moreover major population of the country lives in rural areas and those people have not approach to the modern methods of family planning. Traditional sterilization method based on herbal medicines is used to control population growth rate; including abortion at initial weeks, preventing conception or making the either member of the couple sterile. Perusal of literature revealed that enough work has been done on different medicinal aspects of plants of this area except for gynaecological disorders, abortifacient herbals and plants used to induce abortion [2-4].

Several plant products inhibit male and female fertility and may be developed into contraceptives. Even though, many indigenous plants have been shown to prevent the birth, only few plants have so far been investigated for anti-fertility activity. 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 effects [5,6].

Author α : Department of pharmacology, Rao's Pharmacy College, Nellore, Andhra Pradesh, India. E-mail : stalinmpharm@gmail.com

Table 1 : List of Anti-fertility plants

Botanical name	Family	Parts used	Chemical constituents	References
Abrus precatonius Linn	Fabaceae	Whole plant	Alkaloids, steroids, fixed oils, anthocyannins	Abu et al [7]
Acacia leucophploea Roxb	Fabaceae	Roots	Tannins, phenols, proteins	Dheeraj ahirwar [8]
Aegle marmelos Linn	Rutaceae	Leaves	Alkaloids, terpenes, steroids	Satheesh et al [9]
Butea monosperma Lam	Fabaceae	Whole plant	Stigmosterol flavonoids, amino acids	Ashish mishra et al [10]
Careya arborea Roxb	Lecythidaceae	Roots	Phyto-estrogens, Sito-sterol	A.K.haloi et al [11]
Cissampelos pareira Linn	Manispermaceae	Whole plant	Alkaloids, chalconeflavone	Samanthajhuma et al [12]
Citrus medica Linn	Rutaceae	Fruit peel	Citroflavanoids, glucosides, triterpenoids	Monica kachroo et al [13]
Curcuma longa Linn	Zingiberaceae	Rhizomes	Curcumin Flavonoids	Amit kumar ghosh et al [14]
Dodonea viscosa Linn	Sapindaceae	Whole plant	Alkaloids, phytosterols, poly phenols	R.ramya et al [15]
Hymenocardia acida Tul	Euphorbiaceae	Stem bark	Triterpenoids, glycosides	Abu et al [16]
Madhuca indica Linn	Sapotaceae	Leaves	Triterpenoids	Shivabasavaiah et al [17]
Ocimum gratissimum Linn	Caesalpiniaceae	Stems	Anthraquinones, flavanoids,	Yuvaraj et al [18]
Plumbago rosea Linn	Plumbasinaceae	Leaves	Sitosterol glycosides, tannins, fatty alcohol	Sheeja et al [19]
Raphanus sativus Linn	Brassicaceae	Roots	Raphan alkaloids	Mishra et al [20]
Tabernaemontana divaricata Linn	Apocynaceae	Flowers	Steroids, tannins Flavanoids, aminoacids	Mohd.azeemuddin nukhram et al [21]
Trachysperm ammi Linn	Umbelliferae	Fruits	Tannins, saponins, flavonoids, glycosides	Surendra kumar et al [22]
Tragia involucrata Linn	Euphorbiaceae	Aerial parts	Flavonoids, terpenoids	Chandrashekhar et al [23]

II. Conclusion

Finally, it was clear that the medicinal plants play an important role in treating various diseases. The herbal plants and their extracts have significant anti-fertility activity in animal models. This review showed that above-mentioned medicinal plants possess anti-fertility activity on dose dependent manner and can be used as an alternative for oral contraceptives which are currently in use for birth control.

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