

Herbal Agents Having Abortive Activity

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ABSTRACT

The goal of our study is to increase public awareness of natural contraceptives and their powerful advantages over surgical abortion in order to provide people with an alternative method of ending an unwanted or unplanned pregnancy rather than the dreaded surgical procedure. Since ancient times, traditional remedies have been used all across the world to control fertility. Still, the tribal community mostly relies on these herbs for contraception and to cause abortions. The belief in therapeutic approaches has not been diminished despite the tremendous advancement of allopathic treatment because of its negative side effects. Plants and herbs have been used to induce abortions, although there is very little published information on the most regularly used ones. The goal of this paper is to detail the herbal products used to cause abortion.

Keywords- Contraceptives, Traditional remedies, Abortifacients, Allopathic, Anti-fertility.

I. INTRODUCTION

Plants contain a substantial number of biologically active compounds, which have been used for countless years to cure a variety of human diseases. Many traditional medications are now widely available and regarded as having higher cultural acceptance, better compatibility with the human body, and less side effects and efficacy. 35,000 or more individual plant species are utilized for medical reasons in unique and diverse civilizations across the world [1]. Nearly 80% of the

world's population still believes in the usage of traditional medicine for their health, which mostly involves plant extract. Even if allopathic medication is necessary, there are medicinal plants that can be used instead of allopathic drugs. Numerous herbal preparations are employed as contraceptives and abortion stimulants, emmenagogues, and oxytocic agents in the past [2]. The term "abortion" refers to the early female pregnancy being expelled, whether it occurs spontaneously or is caused intentionally. A drug that causes abortion is known as an abortifacient [3]. Medical

abortion procedures and the use of pharmaceuticals have more drawbacks and side effects are high bleeding, nausea, headache, fatigue, fever, diarrhoea, vomiting, hot flashes, and abdominal cramping and pain, but research shows that medicinal herbs are more compatible with the human body and can produce abortion through various mechanisms ^[4]. The goal of this review is to look at the medical herbs and natural materials that are commonly used to induce abortions. The scientific name, popular name, family, and names of the plant components, as well as the major activity in which they are available, are all included in the list of probable abortifacient plants.

II. HISTORY

Although abortion has been used since antiquity, groups that seek to disparage women's constitutional protections have repeatedly threatened its legality and validity. Despite ongoing attempts to reduce the need for abortions through contraception and counselling, millions of women's health still depends on their ability to access abortions. Until there are significant changes throughout the entire society, that access will never be secure. Abortion-related laws that outright forbid the activity are a relatively new phenomenon.

Male embryos may have abortions within the first 40 days of pregnancy, whereas female foetuses might have them between 80 - 90 days, as permitted by the old Roman Catholic Church. Abortion was officially licenced in 1920 in the Soviet Union, the first contemporary state to do so. Abortion was widely accessible in government clinics in the early years following the 1917 revolution. When it became evident that the Soviet Union would have to defend itself against Nazi Germany, these institutions were shuttered and abortion was banned altogether. Women were offered jobs after World War II, and abortion was once more legalised. 14 states had already reformed their abortion laws by 1973 as a result of reform pressure, and the US Supreme Court finally decided that abortion is a personal choice between a woman and her doctor ^[5]. India enforced abortion in the year 1860 to 1971, Indian Penal Code, criminalizing abortion and punishing both the practitioners and the women who sought out the procedure. As a result, women died in an attempt to obtain illegal abortions from unqualified "midwives and doctors". Abortion was made legal under specific circumstances in 1971, but it is still a risk factor for many women ^[6]. Medical abortion became a viable alternative to abortion with the introduction of prostaglandin analogues in the 1970s and mifepristone as an antiprogesterone in the 1980s ^[7]. Initially, China and France allowed the use of mifepristone (1988). For pregnancies up to 49 days gestation, the FDA authorised a pharmaceutical abortion using combination of 400 mg of oral misoprostol administered 48 hours later with 600

mg of oral mifepristone (progesterone antagonist) in 2000 ^[8]. Despite being legal since 1972, social stigma, a lack of educated staff, and inadequate infrastructure continue to restrict access to safe abortion in India. The termination of unwanted early pregnancies through medical abortion is currently one of the methods accessible. It is straightforward, safe, and effective depending on the patient's state, and as specified in the regulation changes in accordance with that condition. Abortion via medications is a non-surgical intervention and it is predicated on a confirmed combo of unknown medications, mifepristone, and misoprostol. Mifepristone blocks progesterone hormone, necessary to sustain a pregnancy. In India between 1990 and 1998 to access the acceptability, safety, efficacy, and feasibility of the regimen. China and Cuba were the other two countries studied in the first research, which was one of three. Following the legalisation of medical abortion in 2002, four Indian pharmaceutical companies attempted to provide the drugs to gynaecologists across the nation ^[9].

III. IMPORTANCE OF HERBAL REMEDIES

Although the definition of contraception is sometimes misunderstood, it is precisely the act of preventing conception ^[10]. A variety of contraceptive treatments, including contraceptive tablets, Copper-T, tubectomy, condoms, diaphragm, and coitus interrupters, have been used to promote family planning. Oestrogen, progesterone, or their derivatives, either alone or in combination, are frequently found in contraceptive pills. Initiated at the beginning of the 20th century, the idea of sterilization by female sex hormones is quite old. The FDA initially approved Novid in 1959 as the first "pill" that could be used as a contraceptive in the USA. But regrettably, these medications also cause side effects like uterine and breast cancer, obesity, dysmenorrhea, vomiting, and cardiovascular diseases. Thus, as a result, these medications are not long-term safe. Although numerous steps have been taken, there hasn't been much success in reducing the negative effects of these medications. Attention is currently being paid to native plants for potential contraceptive properties due to the substantial negative consequences created by synthetic steroidal contraceptives. Now a days Oestrogen and progesterone-containing contraceptives are mostly used ^[11]. Numerous hormonal contraceptive pills have been developed as a result of advancements in reproductive biology, however none are without side effects, due to this the need to synthesise new chemicals from medicinal plants has emerged. The World Health Organization (WHO) has established a population control program with traditional medical methods for this goal. Currently, there is a global effort being made to look into the efficacy of herbal products as contraceptives ^[12]. Since people have always depended

on herbs and their metabolites as sources of medications and therapeutic agents, the development of novel fertility-regulating drugs derived from medicinal plants is an appealing idea, even if synthetic drugs have recently become widely employed in modern medicine. In comparison to synthetic medications, plant-based products are gaining popularity. They have a long history of exposure in traditional ethnic medical systems like Ayurveda, where they are known for their low toxicity and lengthy history of use [11]. The Ayurvedic literature is replete with tens of thousands of formulations, and roughly 1100 substances are linked to a variety of well-defined therapeutic techniques, including infertility. The Central Drug Research Institute, the Council of Scientific and Industrial Research under the Ministry of Science and Technology, and the Central Council for Research in Ayurvedic Sciences under the Ministry of Health have all expressed an interest in the quest for contraception based on traditional Ayurvedic knowledge (now Ministry of AYUSH), agencies of the Indian government. Additional private Organizations in the industry had already conducted studies [13]. For women who experience difficulties using or don't have access to modern contraceptives, herbal contraceptives offer alternatives,

especially for those living in rural parts of developing countries with dense populations, such as Bangladesh, India, China, and Africa (Nigeria). Studying the strength of native plants that are used as birth control in folk medicine in these nations may increase public trust in and adoption of herbal contraceptives. Due to insufficient inhibition of ovulation or adverse effects, the quest for an orally bioavailable, safe, and effective herbal preparation or its constituent is still ongoing [11].

IV. HERBS HAVING ABORTIVE ACTIVITY

Traditional usage of several herbs to reduce fertility has been supported by modern scientific research, which also confirms the effects on fertility, given in table 1. Ayurvedic contraception may never offer the same level of protection against pregnancy as the pill, but it does provide options for women who find it difficult to use modern methods of contraception or who simply want to try something different. Numerous plants' long-term impacts and general properties are poorly understood [14].

Table 1: List of Plants Having Abortive Activity

Plant name	Family	Using part	Type of extraction	Animal used	Result
<i>Anthocephalus cadamba</i> (Kadamba)	Rubiaceae	Stem Bark	Methanolic Extract	Albino wistar rat	It has shown its Abortifacient potentiality. [15]
<i>Plumeria rubra</i> (Frangipani)	Apocynaceae	Pods	Alcoholic extract	Female Albino Rat	Reduction the quantity of living foetuses. [16]
<i>Phytolacca dodecandra</i> (Endod)	Phytolaccaceae	Leafs	Aqueous Extract	Female Wistar Rat	Blocks the progesterone hormone and pregnancy. [17]
<i>Ruta graveolens</i> (Ruda)	Rutaceae	Aerial parts	Hydroalcoholic extract	Female albino wister rat	Inhibition of pregnancy in 50-60% of rats. [18]
			Aqueous extract	male rats	Sperm motility and density, spermatogenesis, and repressed sexual and aggressive behaviour were reduced. [19]
<i>Bambusa vulgaris</i> (Bamboo)	Poaceae	Leaves	Aqueous extract	Pregnant Dutch rabbit.	Abortive activity [20].
<i>Momordica charantia</i> (Karela)	Cucurbitaceae	Seed, fruit juice		Swiss albino rats	Inducing early and mid-term abortions, but have no signs of teratogenic effects. [21]
<i>Rivea hypocraterifors</i> (Midnapore Creeper)	Convolvulaceae	Aerial parts	Ethanol extracts	Albino wistar rat	Shorter ovulating, metestrus and proestrus phases. [22]
<i>Dolichos trilobus</i>	Fabaceae	Whole plant	Whole plant	Albino female rat	Estrogenic activity,

(Sickle bean)			juice		increases menstrual flow and induces abortion, Uterine stimulant, pelvic rigidity, uterotrophic activity. ^[23]
<i>Abrus precatorius</i> (Koonch)	Fabaceae	seeds	Aqueous suspension of seeds	Female Sprague dawley rat	Totally inhibited ovulation in Sprague Dawley rats and shown neonatal anomalies. ^[24]
<i>Azadirachta indica</i> (Neem)	Meliaceae	Seeds, leaves, flowers and bark	Aqueous extract of <i>A. indica</i> wood ash.	Female mice	Uterotonic effects, excess uterine contractions, which could result in an abortion. ^[25]
<i>Bombax ceiba</i> (red silk cotton tree)	Bombaceae	Roots	Root extract	Male rats	Increase mounting frequency (MF), intromission frequency (IF), ejaculation frequency (EF). ^[26]
<i>Cannabis sativa</i> (Ganja)	Cannabaceae	Leaves	Alcoholic extract	Female wistar rat	Decrease in the ovarian and uterine weight, a slight decrease in the serum estrogen level and an increase in serum progesterone. ^[27]
<i>Garcinia kola</i> (Bitter kola)	Guttiferae	Seeds	Alcoholic extract (soxhlet extraction)	Sprague dawley rat	Partially prevents ovulation and may have teratogenic effects depending on the length in the rat foetus. ^[28]
<i>Cassia fistula</i> (Golden shower)	Fabaceae	Seeds	Aqueous extract	Female rat	Inhibited the uterotrophic effect brought on by oestrogen, demonstrating its anti-estrogenic tendency when there is a high oestrogen present. ^[27]
<i>Trianthema portulacastrum</i> (Horse Purslane)	Aizoaceae	Leaves	Aqueous extract	Female albino rat	Increase uterine weight, diameter of the uterus and thickness of endometrium. ^[27]
<i>Balanites roxburghii</i> (Desert Date)	Zygophyllaceae	Fruits	Ethanollic extract	Female albino rat	Increase in uterine weight, uterine girth and endometrial density, and height of endometrial epithelium. ^[27]
<i>Stachys lavandulifolia</i> (Wood Betony)	Lamioideae		Aqueous extract	Female albino rat	Injected intraperitoneally to the pregnant mice resulting in failure of foetus survival and

					consequently abortion. ^[27]
<i>Ailanthus excels</i> (Urru)	Simaroubaceae	Stem bark	Hydroalcoholic extract	Albino wistar rat	Extract containing ethinyl oestradiol are the two main causes of significant antiestrogenic activity and shows abortifacient activity. ^[27]
<i>Melia azedarach</i> (Chinaberry)	Meliaceae	Seeds	Ethanol extract	Albino wistar rat	Decrease in the size of the uterine glands' luminal sizes, myometrial thickening, and uterine glands' overall size. ^[27]
<i>Mimosa pudica</i> (Humble plant)	Fabaceae	Roots	Powder	Female albino rat	Reduction in the number of normal ova in rats treated with the root powder compared with the control rats, and increase in the number of degenerated ova. ^[29]
<i>Africanus asparagus</i> (Saritti)	Liliaceae	Roots, Leaves	Aqueous extracts	Female sprague dawley rats	Rats reproduce with respect to anti-implantation and antifertility. ^[30]
<i>Rumex steudelii</i> (Tult)	Polygonoacea	Roots	Methanolic extracts	Female albino wistar rats	Lengthened the rats' oestrus cycle ,dose-dependent antifertility, reducing the number of litters and the weights of their ovaries and uteruses and contraceptive effects. ^[31]
<i>Cnidocolous aconitifolius</i> (English Spinach)	Euphorbiaceae	Leaves	Aqueous extracts	Female albino wister rats	Altered the female rats' reproductive hormones, which is evidence of a negative impact on follicle maturation and ovulation, the extract may harm female rats' ability to conceive. ^[32]
<i>Helianthus annus</i> (Sunflower)	Asteraceae	Leaves	Ethanol extracts	Female albino wister rats	lower pregnancy rates. ^[33]
<i>Coleus forskohlii</i> (Coleus)	Laminaceae	Leaves	Methanolic extracts	female albino wister rats	This study on pregnant rat showed that treatment with the highest dose of <i>Coleus forskohlii</i> extract (880 mg/Kg per day) an anti-implantation effect. These finding justify the use of

					<i>Coleus forskohlii</i> extracts for abortive purpose. ^[34]
<i>Achellia millefolium</i> (Tansy)	Asteraceae	Flowers	Hydoalcoholic extract	female albino wister rats	Abortive activity ^[35]
<i>Polygonum hydropiper</i> (smart weed)	Polygonaceae	Leaves	Hydoalcoholic extract	female albino wistar rat	Preventing implantation after fertilizing intercourse. ^[36]
<i>Citrullus colocynthis</i> (bitter apple)	Curcurbitaceae	Fruits	Hydoalcoholic extract	Female albino wistar rat	Terminate pregnancy. ^[36]
<i>Mentha pulegium</i> (Pennyroyal)	Lamiaceae	In form of infusion	Ethanollic aqueous extract	Female albino wistar rat	Abortive activity due to uterine muscles contraction. ^[36]
<i>Actaea racemosa</i> (Black cohosh)	Ranunculaceae	Seeds	Hydroalcoholic extract	Female albino wistar rat	Induced oestrus and increased uterine weight in a dose-dependent manner. ^[36]
<i>Ferula foetida</i> (Asafoetida)	Umbelliferae	Latex		Female albino wistar rat	Asafoetida has a folkloric reputation as an abortifacient and an emmenagogue. ^[36]
<i>Carica papaya</i> (Papai)	Cariaceae	Seeds	Aqueous extract	Female albino wistar rat	Abortifacient properties are side effects of high doses, according to the changed toxicological profile. The findings suggest that the foetus may suffer from <i>Carica papaya</i> poisoning. ^[37]
<i>Cardiospermum helicacabum</i> (Kanphuti)	Spindaceae	Whole plant	Hydroalcoholic extract	Male & female wistar rat	Anti-implantation ,increase uterus weight, inhibit sperm motility. ^[36]
<i>Ricinus communis</i> (Castrol oil)	Euphorbiaceae	Seeds		Adult female rabbit	Decrease in pregnancy rate of female rabbits ^[38]
<i>Cureuligo orchiioides</i> (Golden eye grass)	Hypoxidaceae	Leaves	Hydoalcoholic extract	Female rat, rabbit, guinepig	Powerful uterine stimulant ^[39]
<i>Annona squamosa</i> (Sugar apple)	Annonaceae	Seeds	Aqueous extract	Female albino wistar rat	Abortions, interferes with reproductive processes, rat foetal implantation. ^[40]
<i>Plumbago zeylanica</i> (Ceylon leadwort)	Plumbaginaceae	Root	Methanolic extract	Female rabbit & albino rat	Abortive activity. ^[41]
<i>Plumbago rosea</i> (Leadwort)	Plumbaginaceae	Leaves	Acetone & ethanol extract	Female albino wistar rat	Interrupting the normal oestrous cycle of the rats. an extended resulting production stage of the menstrual cycles with a brief suppression of ovulation as a result. ^[42]

<i>Zizyphus jujuba</i> (jujuba)	Rhamnaceae	Bark	Hydroalcoholic extract	Female rat	Antiestrogenic activity ^[43]
<i>Amaranthus spinous</i> (Spiny amarnath)	Amaranthaceae	Roots	Homogenous crushed roots in rice water	Albino wistar rat	Inhibit sperm & ovum ^[44]
<i>Zingiber officinale</i> (adrak)	Zingiberaceae	Rhizomes	Powder of ginger	Albino wistar rat	Abortifacient activity ^[45]
<i>Tinospora cordifolia</i> (Moon seed)	Menispermaceae	Stem		Male albino wistar rat	Decrease sperm count and sperm motility ^[43]
<i>Plantago ovata</i> (ispagol)	Plantaginaceae	Seeds		Female wistar rat	Abortion ^[43]
<i>Piper betle</i> (Betel pepper)	Piperaceae		Ethanollic extract	Female wistar rat	Antifertility and ant estrogenic effects in female rats. ^[44]
<i>Martynia annua</i> (Devils's claws)	Pedaliaceae	Root	Ethanollic extract	Male wistar rat	reduction in the testicular sperm count, epididymal sperm count and motility, number of fertile males. ^[44]
<i>Alangium salvifolium</i> (Sage leaf alangium)	Alangiaceae	Stem bark	Ethanollic extract	Female wistar rat	Antiprogesterogenic activity ^[46]
<i>Achyranthes aspera</i> (Aaghada)	Amaranthaceae	Root	Ethanollic extract	Female wistar rat	Antifertility activity in proven fertile female albino rats and anti implantation. ^[46]
<i>Aspilia Africana</i> (Haemorrhage plant)	Bignoniaceae	Leaf	Aqueous extract	Female wistar rat	By disrupting the oestrous cycle and having a dose-dependent negative impact on ovulation in rats, antifertility effects. ^[46]
(Varuna) <i>Crataeva nurvala</i>	Capparidaceae	Stem bark	Aqueous extract & ethanollic extract	Female wistar rat	Induced the vagina to expand and become cornified, and they also raised uterine size. ^[46]
<i>Butea monosperma</i> (Bastard teak)	Papilionaceae	Seeds	Aqueous extract	Female wistar rat	Inhibit release of ovum from ovary ^[43]
<i>Taxus wallichiana</i> (Himalayan yew)	Taxaceae	Fresh leaves	Ethanollic extract	Female wistar rat	Abortive activity ^[43]
<i>Rotalaria juncea</i> (Sunn hemp)	Papilionaceae	Seeds	Aqueous extract	Female albino wistar rat	Abortifacient activity ^[43]
<i>Ocimum sanctum</i> (Tulsi)	Labiatae	Leaves	Ethanollic extract	Male and female albino rat	Decrease sperm count and sperm motility, Abortifacient ^[43]
<i>Dioscorea bulbifera</i> (Ratalu)	Dioscoreaceae	Tuber	Roasted powder	Female albino Wistar rat	Inhibit oestrogen hormone, oogenesis ^[44]
<i>Afrormosia laxiflora</i> (Kulkuli)	Leguminosae	Stem bark	Ethanollic extract	Female albino wistar rat	Anti-gonadotropic activity, Block oestrous cycle ^[47]
<i>Solanum</i>	Solanaceae	Fruits	Aqueous	Female albino	Contraception and

<i>xanthocarpum</i> (Yellow-berried Nightshade)			extract	wistar rat	abortion ^[47]
<i>Terminalia arjuna</i> (Arjuna)	Combretaceae	Bark	Ethanollic extract	Female albino wistar rat	Anti implantation as well as abortifacient activity ^[47]
<i>Michelia Champaca.</i> (Champak)	Magnoliaceae	Bark	Ethanollic extract	Female albino wistar rat	Antiimplantation & Abortification activity. ^[43]
<i>Mimosa pudica</i> (Humble plant)	Mimosaceae	Root	Powder	Female albino wistar rat	Contraception and abortion ^[43]
<i>Avicennia marina</i> (Forssk.)	Verbenas	Leaves	Ethanollic extract	Female albino wistar rat	Abortive activity ^[48]
<i>Annona muricata</i> (Custard apple)	Annonaceae	Stem bark leaves		Pregnant female albino rat	Abortifacient activity. ^[48]
<i>Semecarpus anacardium</i> (Marking nut)	Anacardiaceae	Stem bark	Methanollic extract	Male albino wistar rat	Reduction in numbers of spermatogenic cells and spermatozoa in male albino rats ^[49]
<i>Alstonia scholaris</i> (Devils tree)	Apocynaceae	whole plant		Female albino wistar rat	Abortion, menstrual cycle treatment ^[48]
<i>Calotropis gigantean</i> (Crown flower)	Apocynaceae	Roots	Ethanollic extract	Female sprague dawley rat	Abortive activity ^[50]
<i>Indigofera linnaei</i> (Nine- leaved indigo)	Fabaceae	Leaves, seeds	Methnollic extract	Female albino wister rats	Teratogenic and to persuade abortion in pregnant animals. ^[51]
<i>Cissampelos pareiera</i> (Tupukilota)	Menispermaceae	Leaves	Methanollic extract	Female albino wister rats	A prolonged ovulation cycle with a notable lengthening of the diestrus phase and elongation of estrus stage in treatment with higher dose. ^[52]
<i>Ferula jaeschkeana</i> (Wild asafoetida)	Apiaceae	Leaves, seeds, fruits	Ethanollic extract	Female rats	Prevented pregnancy in mated rats when administered orally. ^[53]
<i>(Calliandra brevipes)</i> Derris brevipes	Fabaceae	Root	Ethanollic extract	Female albino wistar rat	Anti implantation, abortifacient activity. ^[54]
<i>Ailanthus excella</i> (Perumaram)	Simaraubaceae	Stem bark	Hydro alcoholic extract	Female albino wistar rat	Hydro alcoholic extract treatment showed a strong antiimplantation (72%) and abortifacient activity (56%) ^[54]
<i>Guaiacum officinale</i> (Tree of Life)	Zygophyllaceae	Leaves, flowers, fruits, tender branches	Hot aqueous extract	Female albino wistar tar	Abortion activity ^[55]
<i>Dodonea viscosa</i> (Hopbush)	Sapindaceae	Leaves	Methanollic extract	Female albino wistar rat	Abortifacient activity ^[27]
<i>Portulaca oleracea</i> (kulfa)	Portulacaceae	Leaves	Ethanollic ecxtract	Female albino wistar rat	Abortifacient activity ^[27]

<i>Stachys lavandulifolia</i> (Wood Betony)	(Lamiaceae)	Leaves	Hydroalcoholic extract	Female albino wistar rat	Abortifacient activity ^[27]
<i>Prunus armeniaca</i> (Apricot)	Rosaceae	Kernels			Antiimplantation activity. ^[56]
<i>Biophytum sanctivum</i> (Lajalu)	Oxalidaceae	Leaves	Ethanol extract	Female albino wistar rat	Antiimplantation activity. ^[56]
<i>Pleioceras barteri</i> (Abeji)	Apocynaceae	Bark and seeds	Ethanol extract	Female albino wistar rat	Abortifacient activity. ^[56]
<i>Justicia adhatoda</i>	Acanthaceae	Root	Dried root powder	Female albino wistar rat	Abortion ^[35]
<i>Momordica charantia</i> (Bitter ground)	Cucurbitaceae	Root	Dried root powder	Female albino wistar rat	Abortion ^[35]
<i>Tanacetum vulgare</i> (Tansy)	Asteraceae	Flowering top	Hydroaqueous extract or tea	Female albino wistar rat	Abortion ^[35]
<i>Crateva religiosa</i> (Spider Tree)	Capparaceae	Stem, bark	Aqueous, ethanol extract	Female albino wistar rat	Preventing pregnancy ^[57]
<i>Cascabela thevetia</i> (Yellow oleander)	Apocynaceae	Seed, fruits	Ethanol extract	Female albino wistar rat	Abortion ^[48]
<i>Aerva lanata</i> (L.) Juss Ex. Shult	Amaranthaceae	Aerial part	Ethanol extract	Female albino wistar rat	Anti implantation activity ^[58]
<i>Arctium lappa</i> Linn	Asteraceae	Leaves and roots	Aqueous extract	Female albino wistar rat	Abortive activity ^[59]
<i>Ailanthus excelsa</i> roxb.	Simaroubaceae	Leaves	Ethanol extracts	Female albino wistar rat	Antiimplantation and abortive effect ^[60]
<i>Moringa oleifera</i>	Moringaceae	Leaves	Ethanol extract	Female albino wistar rats	Abortifacient activity. ^[61]
<i>Artemisia afra</i> Jacq Ex. Wild	Asteraceae	Leaves		Female albino wistar rats	Abortifacient activity. ^[59]
<i>Biophytum sensitivum</i> L.	Oxalidaceae	Leaves		Female albino wistar rats	Anti-implantation effect ^[62]
<i>Cardiospermum Helicacabum</i> L.	Spindaceae	Whole plant		Female albino wistar rats	Anti-implantation activity ^[62]
<i>Cicer arietinum</i> Linn.	Fabaceae	Seeds		Female albino wistar rats	Abortifacient and estrogenic activity ^[63]
<i>Carum carvi</i> Linn.	Apiaceae	Rhizome		Female albino wistar rats	Antioestrogenic activity ^[54]
<i>Cnidioscolous aconitifolius</i> (Mill.)I.M.Johnst.	Euphorbiaceae	Leaves		Female albino wistar rats	Contraception and abortion ^[32]
<i>Derris brevipes</i> Baker	Fabaceae	Root powder		Albino wistar rats	Abortifacient activity. ^[64]
<i>Dipsacus mitis</i> D.Don	Spindaceae	Root		Female hamster	Contraceptive activity ^[65]
<i>Eleutherine bulbosa</i> Urb.	Iridaceae	Bulb		Female albino wistar rats	Abortifacient activity ^[66]
<i>Gloriosa superba</i> Linn.	Liliaceae	Roots		Mice	Oxytoxin activity, abortifacient activity. ^[67]
<i>Galium mexicanum</i>	Rubiaceae	leaves		Cat	Abortifacients

Var					activity. ^[68]
<i>Olea europea</i> Linn.	Oleaceae	Fruits		Female albino wistar rats	Contraceptive activity. ^[69]
<i>Peganum harmala</i> Linn.	Zygophyllaceae	Epigeal Parts		Female albino wister rats	Abortifacients activity. ^[70]
<i>Salvia fruticosa</i> Mill.	Labiatae	Leaves		Female albino wister rats	Anti implantation effect ^[71]
<i>Samida rosea</i> Sims.	Flacourtiaceae	Leaves		Female albino wister rats	Abortifacients and emenagogue ^[72]
<i>Trichosanthes cucumerina</i> Linn.	Curcubitaceae	Whole plant		Female albinowister rats	Antiovolatory effect ^[73]

V. CONCLUSIONS

Birth control is a significant concern in India. Birth control usage has started to diminish after some substantial and time-consuming attempts. Herbs that can be used as abortion inducers have been addressed in this review. Both allopathic and surgical methods as well as the usage of plant-based abortifacients are employed to perform abortions. Herbal contraceptive herbs are natural, inexpensive, produce less side effects than these medical procedures, which are cost-effective but have more negative effects. There is a need to look for innovative approaches from plants because, while the allopathic/instruments utilized procedures are efficient and quick-acting, they come with a significant danger of side effects.

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