Title: ***Herbal Abortifacients as Natural Alternatives to Synthetic Drugs: A Review on Efficacy, Safety, and Public Health Implications***

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Abstract:

The termination of pregnancy through abortion, though legally permissible in many regions including India, continues to face considerable medical, ethical, and logistical challenges. According to global estimates, more than 73.3 million induced abortions occur annually, with a significant number classified as unsafe or medically unsupervised, especially in developing nations. In India, data from the National Family Health Survey (NFHS-5, 2019– 2021) reveals that 25.9% of abortions are conducted at home, and over 54% take place in private institutions, indicating disparities in access to safe, affordable reproductive healthcare. These statistics signal an urgent need to explore alternatives beyond synthetic pharmacological interventions. Currently, synthetic abortifacients such as mifepristone and misoprostol are the standard of care in medical abortion. While clinically effective, these compounds carry several drawbacks. Side effects such as excessive bleeding, gastrointestinal discomfort, cramping, nausea, and, in certain cases, uterine rupture or incomplete abortion have been documented. Alarmingly, unsupervised consumption of these drugs—particularly via over-the-counter sales in rural or stigmatized settings—can lead to life-threatening complications including hemorrhage, sepsis, and even maternal mortality. The high cost of branded drugs, lack of post-abortion care, and confusion between abortion legislation (MTP Act vs. PC-PNDT Act) exacerbate these issues. In this context, herbal abortifacients emerge as viable, culturally accepted, and potentially safer alternatives, especially for communities lacking access to institutional healthcare. Plants such as Gloriosa superba, Plumbago zeylanica, Caesalpinia pulcherrima, and Trachyspermum ammi have long been used in traditional medicine systems, including Ayurveda, Siddha, and Unani, to induce abortion. Their mechanisms—though not fully elucidated—are believed to involve uterotonic activity, hormonal modulation, cervical ripening, and progesterone receptor inhibition, mimicking the physiological effects of synthetic drugs but with lower toxicity risks when used correctly. Several phytoconstituents such as colchicine, plumbagin, saponins, and flavonoids have demonstrated abortifacient or antifertility effects in in-vitro and in-vivo studies. Compared to synthetic drugs, these herbs are often more accessible, culturally acceptable, and economically feasible for women in marginalized regions. Moreover, herbal preparations are generally perceived as more biocompatible and less invasive, reducing psychological and physiological trauma associated with clinical abortion. However, the lack of standardization, dose-dependent toxicity, and limited scientific validation remain key barriers to mainstreaming herbal abortifacients. Without controlled pharmacological studies, the risk of liver toxicity, incomplete expulsion, or hemorrhage cannot be ignored. Thus, while synthetic abortifacients pose clear and serious risks, especially under unsupervised use, herbal alternatives must be rigorously evaluated through clinical research to establish standardized, safe, and ethical protocols.

Introduction

Introduction to Abortifacients:

An abortifacient is any substance that induces an abortion. Abortifacients can induce abortion through various mechanisms. Abortifacient Herbs are natural medicines which can induces termination of pregnancy or abortion. These drugs mainly work within period of first five weeks of pregnancy since fetus development occurs in initial days, size of the fetus also very little. These drug blocks progesterone action due to which uterus sloughs off embryo. Some, like mifepristone, work by blocking progesterone receptors, a hormone crucial for pregnancy maintenance. Others, such as misoprostol, induce uterine contractions, leading to the expulsion of pregnancy tissue. [1,2,3]

International and National survey on Abortifacients:

Globally, the use of abortifacients and experiences with abortion Services vary significantly depending on country- specific laws, Cultural norms, socioeconomic conditions, and access to Healthcare. International surveys and analyses shed light on these Patterns. A recent study using data from the National Family Health Survey (NFHS-5) (2019-2021) in India provides insights into the patterns of Conditions, and access to healthcare. An estimated 73.3 million induced abortions occur worldwide annually and at national level approximately 3.42% of women surveyed reported their last pregnancy within the previous five years ended in a miscarriage, stillbirth, or abortion, with 5,856 (25.72%) of those being induced abortions. The majority of women undergoing induced abortions opted for private facilities (54.66%), followed by at-home abortions (25.90%) and public health facilities (19.44%). A cross-sectional study conducted in Telangana reported an overall abortion prevalence of 19%, with rural areas showing a higher rate (22%) compared to urban areas (16%). The majority of women undergoing induced abortions chose private healthcare facilities (54.66%), followed by at- home abortions (25.90%) and public health facilities (19.44%)[4,5,6,7] The most common reasons cited for abortion were social in nature, including unplanned pregnancies, economic constraints, and a desire to have fewer children, accounting for 64.63% of the cases. Surgical methods were more frequently used than medical abortion methods, with around 70% of cases involving surgical procedures. A small portion (2.43%) of abortions were classified as unsafe. Certain groups—such as women from lower socioeconomic backgrounds, adolescent girls, and those undergoing sex-selective abortions—were more likely to self-manage their abortions at home. The study also found that fetal congenital abnormalities were the most frequently cited medical reason for abortion, followed by pregnancy complications and unwanted pregnancies, with contraceptive failure being the least common cause. Furthermore, abortion was strongly associated with various factors including the mother's age, type of family, socioeconomic status, and educational background. Notably, unsafe abortions, repeat abortions, and complications were more commonly observed in rural areas. A study conducted in Bihar and Maharashtra highlighted limited public awareness of medical abortion, revealing that only 20% of women in Maharashtra and just over 35% of men in Bihar had heard of it. Several challenges continue to hinder the effectiveness and accessibility of abortion services in India. Abortion remains widely underreported due to the sensitive and stigmatized nature of the subject, despite being legally permitted. Access to

services is further restricted by a lack of awareness, limited availability of facilities, social stigma, and various socio-economic barriers. Additionally, the misuse and self-administration of medical abortion pills—often purchased over the counter without medical supervision—pose serious health risks, especially for women in rural areas. Another major issue is the conflation of the Medical Termination of Pregnancy (MTP) Act with the Pre-Conception and Pre-Natal Diagnostic Techniques (PC&PNDT) Act.

While the former governs legal abortion, the latter aims to prevent sex-selective practices; however, confusion between the two can hinder access to safe abortion services. To address these issues, it is recommended that access to safe and legal abortion services be expanded, particularly in rural and underserved areas. Public awareness campaigns should be intensified to educate communities about the legality and availability of abortion services, as well as the dangers of unsafe abortion practices. Additionally, healthcare providers—including doctors, nurses, and pharmacists—should receive enhanced training to effectively prescribe and supervise medical abortions. Lastly, improving the quality of counseling and post-abortion care, including access to contraception, is essential for ensuring the safety and well-being of women. [8,9,10,11]

Risk factors associated with abortifacients:

The risk of miscarriage is lowest among women aged 25 to 29, with an estimated rate of approximately 9.5% to 10%. However, this risk begins to rise noticeably after the age of 30. For women aged 35 and above, the likelihood of miscarriage increases significantly. Around the age of 35, the risk rises to approximately 20%, and by age 40, it further increases to around 33% to 40%. The risk becomes considerably higher by age 45, ranging from about 57% to as high as 80%. In addition to maternal age, several other risk factors contribute to the likelihood of miscarriage. A history of previous miscarriage significantly raises the risk of experiencing another in future pregnancies. Various medical conditions also play a role; chronic illnesses such as diabetes, obesity, thyroid disorders, celiac disease, hyperprolactinemia, and autoimmune conditions like antiphospholipid syndrome are known to increase the chances of early pregnancy loss.

Interestingly, while high blood pressure is generally associated with complications during pregnancy, one study found that women with hypertension had a reduced risk of spontaneous abortion. This unexpected finding may be attributed to improved access to healthcare and better treatment compliance among these women. Lifestyle choices such as smoking, alcohol consumption, drug use, and having an extremely low or high body mass index (BMI) are also known to raise the risk of miscarriage. Additionally, reproductive history plays a role—nulliparous women (those who have never given birth) face a slightly higher risk, and the likelihood of miscarriage tends to increase with the number of previous pregnancies. Although legally induced abortion—particularly in the first trimester—generally carries a low risk of complications, several factors can increase this risk. For instance, adolescent girls are not necessarily more prone to physical complications compared to older women; however, they often face greater psychosocial challenges and encounter more barriers in accessing safe abortion care. Gestational age is another important factor, as the risk of complications such as heavy bleeding tends to rise as pregnancy progresses. The type of abortion also significantly influences risk levels. Unsafe abortions, which may involve

unregulated abortifacients or procedures performed by untrained providers, are associated with a much higher likelihood of severe complications, including hemorrhage, infection, uterine perforation, and even death. Moreover, the experience of the healthcare provider plays a critical role—surgical abortions conducted by inexperienced practitioners are more likely to result in complications. [12,13,14,15,16]

Classification of contraceptives, their routes of administration and Associated side effects:

Contraceptives, or birth control methods, can be categorized based on their mechanism of action and hormonal involvement. Oral contraceptives, taken daily by mouth, include combination pills (containing estrogen and progestin) and progestin-only pills. Common side effects include nausea, vomiting, headaches, mood swings, weight changes, and irregular bleeding. In rare cases, serious side effects like blood clots, stroke, or liver tumors may occur, particularly in women over 35 who smoke or have certain medical conditions. Injectable contraceptives, such as Depo-Provera, are administered intramuscularly or subcutaneously and are progestin-only. While they may cause irregular bleeding, amenorrhea, weight gain, and headaches, they also carry risks like delayed fertility return and bone density loss with prolonged use. Implants, such as Nexplanon or Implanon, are inserted under the skin of the upper arm and release progestin. These may cause irregular bleeding, mood swings, and localized pain, with rare complications like ectopic pregnancy or insertion/removal issues. Transdermal patches, applied weekly to the skin, combine estrogen and progestin and may cause skin irritation, headaches, or nausea. However, they pose a higher clotting risk, particularly in smokers or those with a high BMI. The vaginal ring, inserted monthly, also delivers a combination of hormones and shares similar side effects with oral pills, such as mood changes and breast tenderness, with rare but serious risks like blood clots. Intrauterine devices (IUDs) are inserted into the uterus and come in hormonal and copper types. Hormonal IUDs can cause lighter or missed periods, while copper IUDs may lead to heavier and more painful menstruation initially. Though effective and long-lasting, both types carry risks such as pelvic infections, expulsion, and rare uterine perforation. Barrier methods, including male and female condoms, diaphragms, and cervical caps, work by physically preventing sperm from reaching the egg. While generally safe, they may cause allergic reactions or irritation. Diaphragms and caps, if misused, may increase the risk of UTIs or toxic shock syndrome. Spermicides, available as gels, foams, or suppositories, are inserted vaginally before intercourse. They may cause irritation and do not offer STI protection—in fact, they may increase infection risk by irritating the vaginal lining. Permanent contraception includes surgical options like tubal ligation for women and vasectomy for men. These procedures are generally safe, though they can involve pain, infection, and, in rare cases, complications like ectopic pregnancy or chronic pain (in men). Finally, emergency contraception is available in pill form (e.g., levonorgestrel or ulipristal acetate) or via copper IUD insertion. Common side effects include nausea, vomiting, abdominal pain, and fatigue. [17,18,19,20,21]

Receptors involved in abortion induction by abortifacients:

Medical abortion typically involves a two-drug regimen consisting of mifepristone followed by misoprostol, both of which act on specific receptors to initiate pregnancy termination. Mifepristone, administered orally, is a selective progesterone receptor modulator. It binds with high affinity to intracellular progesterone receptors in the myometrium, endometrium,

and decidual cells, effectively acting as an antiprogestin because it does not activate the receptor. This antagonism leads to key uterine changes, including the withdrawal of local progesterone support, decidual necrosis (breakdown of the uterine lining and embryo detachment), cervical softening, increased uterine contractility, and enhanced sensitivity to prostaglandins, which primes the uterus for the action of misoprostol. In addition to its antiprogestin effect, mifepristone also acts as a glucocorticoid receptor antagonist, interfering with cortisol signaling at higher doses—a property used in treating conditions like Cushing's syndrome.

Misoprostol, which can be administered orally, buccally, sublingually, vaginally, or rectally, is a synthetic prostaglandin E 1 analog. It primarily targets prostaglandin receptors—specifically EP2, EP3, and EP4—in the myometrium. Activation of these receptors results in strong uterine contractions, cervical ripening, and dilation, facilitating the expulsion of pregnancy tissue. Other, receptors may also play secondary or theoretical roles. Oxytocin receptors, although critical in labor induction, are less active during early pregnancy due to the low sensitivity of the myometrium to oxytocin in the first trimester. Serotonin receptors, including 5-HT2, 5-HT3, and 5-HT4, have been found to regulate uterine contractility in non-pregnant individuals, but their role in pharmacologically induced abortion is not well-defined. Similarly, adrenergic receptors are involved in uterine muscle tone, with alpha-adrenergic receptors promoting contraction and beta- adrenergic receptors promoting relaxation, but their hormonal regulation during medical abortion is complex and not fully understood. [22,23,24,25,26]

Factors contributing to the use of herbal abortifacients:

Despite the availability of safe and legal abortion methods in many regions, some individuals continue to resort to herbal abortifacients, particularly in settings where access to conventional healthcare is limited or restricted. Several key factors contribute to this practice. One major reason is the lack of access to conventional healthcare. Individuals living in remote or rural areas often face significant geographical barriers to reaching medical facilities. In places where legal restrictions or bans on abortion exist, people may turn to illegal and unsafe alternatives, including herbal remedies.

Furthermore, social stigma surrounding abortion and limited awareness about legal services and available resources discourage individuals from seeking professional care. Cultural beliefs and perceptions also play a significant role. In many societies, herbal medicine is deeply ingrained in traditional practices and is often viewed as natural, effective, and safer than modern medicine. Those with prior experience using herbal remedies for pregnancy-related concerns may trust these methods based on familiarity or perceived success. Unfortunately, misconceptions about herbal products— such as assuming natural means safe—can lead to underestimation of their potential risks and toxicity.

Socioeconomic factors further drive the use of herbal abortifacients. The high cost of modern healthcare, including abortion services, can be prohibitive for those with low income, making herbal remedies appear to be a more affordable alternative.

Studies show that individuals with lower income and education levels are more likely to use herbal products during pregnancy, often due to limited access to reliable medical information and services. Additionally, discrepancies between traditional and modern medical perspectives

can influence decision-making. Many healthcare providers have limited knowledge about the specific toxicities and pharmacology of herbal abortifacients, which hampers their ability to offer accurate guidance. Moreover, much of the available information about these remedies is anecdotal rather than scientifically validated, creating conflicting views about their safety and effectiveness. It is important to emphasize that the use of herbal abortifacients can pose serious health risks, including liver damage, excessive bleeding, infection, and even death. Individuals considering or having used herbal methods should seek immediate medical attention if complications arise. [27,28,29,30,31]

Medical abortion typically involves a two-drug regimen consisting of mifepristone followed by misoprostol, both of which act on specific receptors to initiate pregnancy termination. Mifepristone, administered orally, is a selective progesterone receptor modulator. It binds with high affinity to intracellular progesterone receptors in the myometrium, endometrium, and decidual cells, effectively acting as an antiprogestin because it does not activate the receptor. This antagonism leads to key uterine changes, including the withdrawal of local progesterone support, decidual necrosis (breakdown of the uterine lining and embryo detachment), cervical softening, increased uterine contractility, and enhanced sensitivity to prostaglandins, which primes the uterus for the action of misoprostol. In addition to its antiprogestin effect, mifepristone also acts as a glucocorticoid receptor antagonist, interfering with cortisol signaling at higher doses—a property used in treating conditions like Cushing's syndrome. [32,33,34,35]

Lastly, herbal abortifacients—used in traditional medicine—have poorly defined mechanisms. These may include compounds that mimic prostaglandins or influence hormonal pathways, but their receptor targets and physiological effects remain largely uncharacterized due to limited scientific study .Advancing the development of herbal medicines for abortion through evidence-based studies can help identify active compounds, optimize dosage, and minimize adverse effects, ultimately contributing to safer reproductive health options, especially in low-resource settings[36,37,38].

1. Abrus precatorius (Gunja)

Marathi Name: Gunja
Synonyms: Raktika, Kakanantika, Kakachincha, Kakapilu, Kakadanti, Shweta Gunja
Botanical Name: Abrus precatorius
Family: Fabaceae
Chemical Constituents: Abrin, alkaloids, steroids, flavones, glycosides
Effect of Drug: Uterine contractant, emmenagogue
MOA: Abrin inhibits protein synthesis, promotes expulsion
Uses: Laxative, expectorant, hair growth
Contraindications: Gastric ulcers, GIT irritation

2. Acacia catechu (Khadir)

Marathi Name: खदिर / खरै
Synonyms: Black catechu
Botanical Name: Acacia catechu
Family: Fabaceae
Chemical Constituents: Catechin, epicatechin, condensed tannins
Effect of Drug: Uterine tonic (indirect)
MOA: Astringency strengthens uterine tone
Uses: Diarrhea, ulcers, haemostatic
Contraindications: Constipation

3. Achyranthes aspera (Putkanda)

Marathi Name: Aghada

Synonyms: Stachyarpagophora aspera, Achyranthes australis

Botanical Name: Achyranthes aspera

Family: Amaranthaceae

Chemical Constituents: Triterpenoid saponins, ecdysterone

Effect of Drug: Abortifacient, estrogenic

MOA: Inhibits LH/FSH, blocks ovulation **Uses:** Abortion, piles, scabies

Contraindications: Nausea, kidney impairment

4. Ginger (adrak)

Synonyms- Shunti, Ardhraka, Ginger flower.

Biological Name- Zingiber officinale.

Family- Zingiberaceae**.**

Chemical constituents- Zingiberol, gingerols, a-curumene, zingerone, zingiberenes, gingerone A, etc.

Uses- Used as rubefacient stimulant, digestive gastro intestinal stimulant, carminative, stomachic, as abortifacient.

Mechanism of Action- Ginger contains compounds that can stimulate uterine muscle contractions, potentially leading to the onset of menstruation.

Contraindications- During pregnancy and lactation, bleeding disorder

5. Aerva lanata

Marathi Name: गोरखगडी or पारस पाटी

Synonyms: Aerva tomentosa forsk, Illecebrum lanatum L.

Biological name: Aerva lanata (L.)

Family: Amaranthaceae**.**

Chemical constituents. Alkaloids (Aervine, Aervoside), flavonoids (Kaempferol, Quercetin), Triterpenoids (Lupeol, betulin), steroids (B-sitosterol), and saponins.

Effect of drug: mild uterine Stimulant activity**.**

Part used: whole plant or roots

MOA: Aerva lanata have mild uterine stimulant (uterotonic) effects, which might promote menstruation (emmenagogue).

Uses: used in kidney stones, Mild emmenagogue

Contraindication: Severe dehydration, Hypotension, avoid during pregnancy

6. Alangium

Synonyms: Alangium decapetalum Lam., Alangium lamarckii Thwaites, and Karangolum salviifolium (L.f.) Kuntze

Biological Name: sage-leaved Alangium is Alangium salviifolium (L.f.) Wangerin.

Family: Cornaceae**.**

Chemical Constituents: alkaloids, flavonoids, tannins, terpenoids, and glycosides. It is also a source of phenols, steroids, and phenolic glycosides such as salviifosides A-C. Additionally, the plant contains various other compounds like sterols, salicin, and kaempferol.

Plant Taxonomy

Kingdom: Plantae **Clade:** Tracheophytes**, Clade:** Angiosperms**, Clade:** Eudicots**, Clade:** Asterids

Order: Cornales **Family:** Cornaceae **Genus:** Alangium

Species: A. salviifolium

Effect of Drug: Uterotonic, abortifacient, anti-inflammatory, anticonvulsant.

Parts Used: Root bark, leaves, seeds

MOA: (Mechanism of Action): Likely acts through stimulation of uterine muscles and possible estrogenic or hormonal modulation leading to disruption of early pregnancy.

Uses: Used traditionally to induce abortion, relieve fever and pain, and in treatment of epilepsy.

Contraindication: strong uterine stimulant properties; overdose may cause neurotoxicity and convulsions.

7. Aloe vera

Marathi Name: कोरफड (Korphad)

Synonyms: Aloe barbadensis, Aloe humilis Blanco, Aloe indica Royle, nomen nudum, Aloe perfoliata var.

Biological Name: Aloe barbadensis miller**.**

Family: Asphodelaceae (Liliaceae)

Chemical Constituents: including vitamins, enzymes,
minerals, sugars, amino acids, and fatty acids. The gel and latex portions of the plant have different compositions. Key constituents include polysaccharides like acemannan, anthraquinones (like aloin), and various vitamins (A, C, E, B12).

Plant Taxonomy **-Domain:** Eukaryota

Kingdom: Plantae **Phylum:** Spermatophyta **Subphylum:** Angiospermae

Class: Monocotyledonae **Order:** Asparagales

Family: Asphodelaceae **Subfamily:** Asphodeloideae **Genus:** Aloe **Species:** Aloe barbadensis miller

Effect of Drug: Laxative, uterine stimulant, anti-inflammatory, immunomodulatory, antioxidant.

Parts Used: Leaf gel, latex

Mechanism of Action (MOA): Latex anthraquinones (aloin A/B) are converted in the colon to active anthrones stimulating peristalsis and inhibiting water reabsorption. The gel's polysaccharides (acemannan) enhance immune response and wound repair; anthraquinones may also induce uterine contractions (emmenagogue/abortifacient).

Uses: Traditionally used as a purgative, for inducing menstrual flow and; topically for wounds, burns, skin inflammations; internally for constipation; also used in immunotherapy, antioxidant supplementation, anti-inflammatory regimens.

Contraindications: kidney/liver toxicity, abdominal cramps, diarrhea

8. Ananas comosus (Pineapple)

Marathi Name: अननस
Synonyms: Pineapple
Botanical Name: Ananas comosus
Family: Bromeliaceae
Chemical Constituents: Bromelain, flavonoids
Effect of Drug: Mild uterine stimulant
MOA: Cervical softening, increases uterine motility
Uses: Digestive aid, anti-inflammatory
Contraindications: Avoid unripe fruit in pregnancy

9. Andrographis paniculata (Kalmegh)

Marathi Name: ओली किरात
Synonyms: Green chireta
Botanical Name: Andrographis paniculata
Family: Acanthaceae
Chemical Constituents: Diterpenoids, flavonoids
Effect of Drug: Antiviral, immune booster
MOA: Stimulates immune response
Uses: Fever, diarrhea, infections
Contraindications: Autoimmune diseases, allergies

10. Annona reticulata (Ramphal)

Marathi Name: रामफळ
Synonyms: Bullock's heart
Botanical Name: Annona reticulata
Family: Annonaceae
Chemical Constituents: Annonacin, flavonoids, tannins
Effect of Drug: Abortifacient (seed)
MOA: Mitochondrial disruption, embryo-toxic
Uses: Antitumor, emmenagogue
Contraindications: Neurotoxic in high dose

11. Annona squamosa (Seetaphala)

Marathi Name: सीताफळ
Synonyms: Sugar-apple, Custard apple **Botanical Name:** Annona squamosa
Family: Annonaceae
Chemical Constituents: Acetogenins, alkaloids, saponins
Effect of Drug: Abortifacient, uterine stimulant
MOA: Uterine irritant
Uses: Abortion, insecticide
Contraindications: Toxic seeds, not for pregnancy

12. Arctium lappa L.

Marathi nome: Eirani (ऐरणी), एरड)

Synonyma: Lappa, fox's clote, Thorny. Burr, Beggar's buttons, Bardana Biological name: Arctium Lappa L.

Family: Asteraceae Chemical constituents: volatile oil, lignans, sesquiterpene lactones, polyynes, polysaccharides, phytosterols, tannins, flavonoids, amino acid, trace elements & other compounds. Include arctiin, arctigenin

Effect of drug: abortifacient

Part used: Leaves & roots

MOA: It stimulate menstrual flow

Uses: It traditionally used as a blood purifier & liver tonic. A Help manage chronic inflammation & oxidative stress.

Contraindication: Strong detox effects could mobilize toxins, Rare allergic reactions.

13. Arishtaka (Sapindus trifoliatus)

Marathi Name: Reetha

Synonyms: Soap nut

Botanical Name: Sapindus trifoliatus

Family: Sapindaceae

Chemical Constituents: Saponins, triterpenoids, mucilage

Effect of Drug: Abortifacient

MOA: Uterine stimulant

Uses: Skin disorders, epilepsy

Contraindications: Eye/skin irritation

14. Aristolochia tagal

Marathi Name: वाघवल, दतवल

Synonyms: ristolochia acuminata Roxb., Aristolochia eschscholtzii Ledeb. Ex Duch., Aristolochia japonica Miq., Aristolochia longifolia Roxb

Biological Name: Indian birthwort or Dutchman's pipe,

Family: Aristolochiaceae

Chemical Constituents: aristolochic acids, aristolactams, aporphines, protoberberines, isoquinolines, benzylisoquinolines, amides, flavonoids, lignans, biphenyl ethers, coumarins, tetralones, terpenoids, benzenoids, and steroids.

Plant Taxonomy **-Kingdom:** Plantae

Phylum: Streptophyta

Class: Magnoliopsida
Order: Piperales

Family: Aristolochiaceae (Birthwort family)

Genus: Aristolochia

Species: Aristolochia tagala Cham

Effect of Drug: Uterotonic, emmenagogue; also, febrifuge and tonic.

Parts Used: Roots, leaves

MOA: Uterine contractions are induced likely through direct stimulation by aristolochic acids; potential modulation of smooth muscle calcium signaling.

Uses: used to stimulate menstruation, assist parturition, treat fever

Contraindication: Pregnancy, avoided during lactation due to toxicity; long-term use contraindicated due to renal damage and carcinogenic risk

15. Artemisia maritima.L

Marathi name: Kirmani ova, Dhor Davana, Davana and Nagdamni

Synonyms: Sea wormwood

Biological name: Artemisia maritima L

Family: Asteraceae

Chemical Constituents: Contains sesquiterpene lactones (e.g., santonin), volatile oils rich in camphor and borneol, flavonoids (e.g., luteolin, apigenin), coumarins, tannins, and bitter principles such as artemisinin-like compounds

Plant Taxonomy **-Kingdom:** Plantae

Phylum (Division): Tracheophyta **Subphylum (Subdivision):** Spermatophytina

Class: Magnoliopsida

Order: Asterales

Family: Asteraceae (Compositae)
Subfamily: Asteroideae

Genus: Artemisia

Species: Artemisia maritima

Effect of drug: Anthelmintic, emmenagogue, febrifuge, abortifacient

Parts used: Aerial parts (leaves, flowering tops)

MOA: Sesquiterpene lactones likely stimulate uterine contractions; bitter principles induce emesis and purgation.

Uses: Traditional use against intestinal worms, to induce menstruation/abortion, and to reduce fever.

Contraindication: gastric ulcers, children; potential neurotoxicity at high doses.

16. Artemisia scoparius linn

Marathi Name: Kapurkachi (कापरकाची)

Synonyms: Artemisia capillaris Thund, Redstem wormwood.
Biological Nome: Artemisia scoparius Linn **Family:** Asteraceae

Chemical constituents: Coumarins, Flavonoids, sesquiterpene lactones, phenolic acids, essential oils (eg. camphor, cineole, borneol).

Effect of drug: stimulate uterine contraction. Part used: leaves & flowering tops

MOA: These may have uterine stimulant (uterotonic) effects. potentially triggering uterine contraction.

Uses: 1) Treatment of Jaundice 2) liver protection.

Contraindication:1) Avoid during pregnancy. 2) Severe liver disease

17. Ashoka (Saraca indica)

Marathi Name: अशोक
Synonyms: Ashok Vriksh
Botanical Name: Saraca indica
Family: Leguminaceae
Chemical Constituents: Glycosides, flavonoids, tannins
Effect of Drug: Uterotonic
MOA: Stimulates uterus and ovary
Uses: Anti-implantation, menstrual regulator
Contraindications: Heart disease, constipation

18. Ashwagandha (Somnifera)

Marathi Name: अश्वगधा

Synonyms: Indian ginseng, Winter cherry **Biological name:**

Withania somnifera **Family:** Solanaceae 3. Withania

Chemical Constituents: Major active compounds are withanolides, such as withaferin A, along with alkaloids and sitoindosides. Withanolides are steroidal lactones that mimic steroid hormones, potentially affecting the hormonal balance and promoting uterine activity at high doses.

Effect of drug: In large doses, stimulates uterus; in small doses, adaptogenic

Part used: Roots

MOA: Mimics steroid hormones, may act as progesterone antagonist; induces uterine contraction at high doses

Uses: Tonic, adaptogen, nervine, fertility enhancer in men Contraindications: High doses contraindicated during pregnancy due to uterine stimulation

19. Avicennia marina

Marathi name: काळी सावर, काळी चखलमाती

Synonyms: Avicennia officinalis var, marina, Avicennia alba blume

Biological name: Avicennia marina

Family: Acanthaceae Chemical constituents: Iridoid glycosides (eg, geniposidic acid), Triterpenoids (eg. lupeol), Naphthoquinone (eg,avicennonen A) ,Alkaloids.

Effect of drug: Analgesic, hepato-protective.

Part used: bark & leaves.

MOA: triterpenoids or alkaloids in other species can Sometimes affect uterine tone.

Uses: Treatment in skin disease & ulcers, Healing of wounds & cuts

Contraindication: Pregnancy & breastfeeding.

20. Azadirachta Indica

Marathi name – कडुदनिंब(Kadulimb)

Synonyms Antelaea azadirachta (L.) Adelb. ,Acanescens CelsMelia indica.

Biological name- Neem and Mahogany.

Family –Meliaceae

Chemical constituents –limonoids like azadirachtin, as well as other compounds like alkaloids, triterpenoids, flavonoids, and phenolic compounds. Azadirachtin is considered the most active biochemical compound.

Plant Taxonomy **Kingdom:** Plantae (Plants) **Division:** Magnoliophyta (Flowering plants)

Class: Magnoliopsida (Dicotyledons) **Order:** Sapindales

Family: Meliaceae (Mahogany family) **Genus:** Azadirachta **Species:** indica

Effect of drug- antimicrobial, anti-inflammatory, anti-ulcer, and antidiabetic, Abortifacient effects.

Part used- Neem oil, leaves, bark

Mechanism of action – Neem (Azadirachta indica) plants parts shows antimicrobial role through inhibitory effect on microbial growth/potentiality of cell wall breakdown.

Uses- used as anti-inflammatory, dental issues, and gastrointestinal problems, as well as acting as a natural insecticide and pesticide.

Contraindications –blood disorders, seizures, loss of consciousness.

21. Balonites roxburghi

Marathi name- Hinganbet or Hinger, Ingudi and Hingota.

Synonyms –Agialid roxburghii (Planch.) Kuntze, Balanites aegyptiaca varindica Voigt, Balanites aegyptiaca var. roxburghii (Planch.) Duthie, Balanites indica Tiegh

Biological name –Desert Date tree

Family – Zygophyllaceae

Chemical constituents –saponins, flavonoids, tannins, alkaloids, and phenols. The plant also contains fatty acids, such as oleic and linoleic acids, and unsaponifiable matter like squalene, beta-sitosterol, and stigmasterol. Additionally, it's a source of nitrogen, potassium, and phosphorus.

Plant Taxonomy – Kingdom: Plantae **Class:** Magnoliopsida

Order: Zygophyllales **Family:** Zygophyllaceae (or sometimes Simaroubaceae)
Genus: Balanites **Species:** Balanites roxburghii Planch.

Effect of drug –Antioxidant, Antifertility and Abortifacient **Parts used** –fruit

Mechanism of action –The extract's potential to disrupt the hormonal balance, specifically by influencing estrogen levels, is a likely mechanism for its abortifacient action. Estrogens play a crucial role in maintaining the uterine lining and supporting pregnancy.

Uses - Abortifacient, skin disease, abdominal pain (root) Contraindications -hormonal imbalance, potential toxicity

Marathi Name –तमालपत्र (Tamalpatra).

Synonyms – tejpatta, tejpat, Indian cassia, and Malabar leaf. Biological name -Laurus Nobilis

Family –Lauraceae

22. Barleria cristata L.

Marathi Name: Vajradanti , वज्रदतीं

Synonyms: Barleria Cristata var.alba, Justicia cristata, Barleria indica L.

Biological name: Barleria Cristata L.

Family: Acanthaceae

Chemical constituents: Iridoid glycosides (eg, barlerin), Flavonoids (Apigenin, luteolin, quercetin derivatives), Tannis, saponins,etc.

Effect of drug: abortifacient & regulate menstruation

Part used: leaves or roots

MOA: It irritate the uterus or stimulate uterine contractions

Uses: 1) Traditionally used for menstrual problems in some communities. 2) Treatment of cough & respiratory infections

Contraindication: 1) It should be avoided during pregnancy to prevent risk of miscarriage 2) People with known allergies should avoid it.

23. Bauhinia racemosa lam.

Marathi Name: (आप्पच पान) **Synonyms:** phanera racemosa, Sonpatra
Biological name: Bauhinia racemosa lam. **Family:** leguminosae

Chemical constituents: flavonoids (eg. quercetin, kaempferol), Tannin, sterols, (eg. B-sitosterol), saponins. **Effect of drug:** uterotonic

Part used: leaves & bark **MOA:** uterine muscle stimulation

Uses: 1) It is used traditionally for wound healing, diarrhea & inflammation.

Contraindication: Children should avoid, severe constipation, and chronic liver & kidney disease.

24. Berry

Marathi name – Berry **Synonyms** –fruit, drupe, drupelet, haw, hip, or pome,
Biological name – Berry **Family** – Ericaceae(heath) family

Chemical constituents – phenolic compounds like flavonoids including Anthocyanins and Flavonols , phenolic acids and tannis

Effect of drug – Antioxidant and Anti-inflammatory, reduce inflammation, gut health

Part used – fruits, leaves and even seeds

Mechanism of action- primarily due to their high concentration of bioactive compounds like polyphenols, antioxidants, vitamins, and minerals. These compounds contribute to the prevention and treatment of various diseases by impacting oxidative stress, inflammation, and cellular signaling pathways

Uses- strengthen uterine muscles and potentially shorten labor.
Contraindications – medication introductions Blood thinner, diabetes medications, Allergies, G6PD, etc

25. Biophytum

Marathi name –Lajwanti (लाजविंती) and Jharera (झररा). **Synonyms** – Mukkutti, Little Tree Plant, Vipareeta Lajjalu. **Biological name** – Oxalis sensitive **Family** – Oxalidaceae

Chemical constituents – flavonoids, phenolic compounds, saponins, essential oils, polysaccharides, and pectin. Specifically, it has been found to contain biflavones like amentoflavone and cupressuflavone, flavonoids such as luteolin 7-methyl ether, isoorientin, and 3'-methoxyluteolin 7- Oglucoside. The essential oil also contains benzene derivatives and monoterpenes.

Plant Taxonomy – Kingdom: Plantae Clade: Tracheophytes Clade: Angiosperms Clade: Eudicots Clade: Rosids Order: Oxalidales

Family: Oxalidaceae **Genus:** Biophytum **Species:** Biophytum sensitivum (L.) DC.

Effect of drug – anti-inflammatory, diabetic, and immunomodulatory properties.

Part used- leaves

Mechanism of action –Stimulates uterine contractions. Prostaglandin modulation: May influence prostaglandin pathways, which are involved in cervical ripening and uterine contractions. Hormonal influence: Some studies suggest potential estrogenic or anti-pregestational effects.

Uses- Anti-inflammatory, Antioxidant, Immunomodulatory, analgesic, anti-pyretic.

Contraindications –Allergy and kidney Stones.

26. Bitter apple

Marathi Name: इद्रावरुनी (Indravaruni), कडइद्रावरणी (Kadu Indravaruni),इद्रायण (Indrayan), कडविंि ावन (Kadu Vrindavan)

Synonyms: colocynth, bitter cucumber, desert gourd, vine of Sodom, and wild gourd.

Biological Name: Citrullus colocynthis. **Family:** Cucurbitaceae

Chemical Constituents: It contains cucurbitane-type triterpenoid derivatives (e.g., sitosteryl glucoside, stigmastadienyl glucoside, hydroxylated friedelene), along with bitter constituents similar to cucurbitacins.

Plant Taxonomy Kingdom: Plantae

Division: Magnoliophyta **Class:**Magnoliopsida **Order**: Cucurbitales **Family:** Cucurbitaceae

Genus: Citrullus **Species:** Citrullus colocynthis

Effect of drug: Abortifacient and ecbolic; emmenagogue

Parts used: Leaves and roots (used as teas or decoctions)

MOA: Likely via uterine stimulation (ecbolic effect) and hormonal modulation causing menstrual flow or abortive action (traditional evidence).

Uses: Used to induce abortion, childbirth acceleration, emmenagogue.

Contraindication: potential toxicity if misused. Japonica.

27. Black cohosh

Marathi name – (commonly known as Black Cohosh in India)

Synonyms – Black snakeroot, Bugbane, Actaea

Biological name – Actaea racemosa (formerly Cimicifuga racemosa)

Family – Ranunculaceae

Chemical constituents – Triterpene glycosides (actein), flavonoids, isoferulic acid

Effect of drug – Estrogenic, anti-inflammatory, sedative

Part used – Root and rhizome

Mechanism of action – Modulates estrogen receptors and reduces LH surges

Uses – Menopausal symptoms (hot flashes, mood swings), PMS, arthritis

Contraindications – Pregnancy, liver disorders, hormone- sensitive cancers.

28. Blue cohosh

Marathi name – (commonly referred to by English name)

Synonyms – Papoose root, Squaw root

Biological name – Caulophyllum thalictroides

Family – Berberidaceae

Chemical constituents – Alkaloids (caulophylline), saponins, glycosides

Effect of drug – Uterine stimulant, antispasmodic

Part used – Root and rhizome

Mechanism of action – Stimulates uterine contractions and relieves muscle spasms

Uses – Labor induction (traditional), menstrual cramps

Contraindications – Pregnancy (unless under supervision), heart conditions, high toxicity in large doses.

29. Borassus flabellifer L.

Marathi Name: ताड

Synonyms: palmyra palm, borassus aethiopum, borassus domesticus Gmel.

Biological name: Borassus flabellifer L.

Family: Arecaceae

Chemical constituents: Sugars, tannins, saponins, Flavonoids, Steroids, vitamins.

Effect of drug: urotonic & promote menstruation. Part used: roots & immature fruits

MOA: stimulate uterine muscle.

Contraindication

1] Individuals with known allergy to palms

2) Pregnant women should avoid it.

30. Buddlegic asiatica lour.

Marathi Name: भारगी (Bharangi)

Synonyms: Buddleja crispa, bharangi, Dogtail

Biological Name: Buddlegic asiatica lour.

Family: Scrophulariaceae.

Chemical constituents: Flavonoids (eg. luteolin, quercetin derivatives) Iridold glycosides (eg,buddlejoside),Triterpenoids.

Effect of drug: menstrual regulation

Part used: leaf & root

MOA: It can stimulate uterine smooth muscle contractions

Uses: 1) It is used as emmenagogue 2) abortifacient. 3)used as a mild laxative

Contraindication: Pregnant women should avoid because it can cause miscarriage and Pre-existing uterine disorder.

31. Caesalpinia bonduc

Marathi name – सागरगोटा

Synonyms – Bonduc nut, Fever nut

Biological name – Caesalpinia bonduc

Family – Fabaceae

Chemical constituents – Saponins, diterpenoids, caesalpinins

Effect of drug – Antipyretic, tonic, antimalarial

Part used – Seeds

Mechanism of action – Acts on thermoregulation and immune response

Uses – Fever, malaria, weakness

Contraindications – Pregnancy, excess dose may cause nausea.

32. Caesalpinia pulcherrima (Mayur-shobha)

Marathi Name: मयरूशोभा

Synonyms: Peacock flower

Botanical Name: Caesalpinia pulcherrima

Family: Fabaceae

Chemical Constituents: β-sitosterol, caesalpin Effect of Drug: Abortifacient, emmenagogue
MOA: Hormonal modulation, histamine release

Uses: Abortion, antimalarial

Contraindications: Avoid in pregnancy.

33. Calotropis gigantea (Rui)

Marathi Name: Rui, Akamadar **Synonyms:** Alarka, Mandara

Botanical Name: Calotropis gigantea

Family: Asclepiadaceae

Chemical Constituents: Cardenolides, calotropin, giganteol

Effect of Drug: Abortifacient, uterotonic

MOA: Latex causes strong uterine contraction

Uses: Bronchitis, dysentery, abortion

Contraindications: Convulsions, vomiting.

34. Calotropis procera (Arka)

Marathi Name: रूई **Synonyms:** Swallow-wort, Aak
Botanical Name: Calotropis procera
Family: Apocynaceae
Chemical Constituents: Calotropin, uscharin, enzymes
Effect of Drug: Abortifacient, irritant
MOA: Stimulates smooth muscles
Uses: Abortion, skin disease
Contraindications: Toxic latex, poisoning.

35. Cardiospermum helicacabum

Marathi Name: कानफटी **Synonyms** – Balloon-vine heart-seed, Heart's Pea, and Blister creeper.

Biological name – Balloon vine

Family – Sapindaceae (Soapberry family).

Chemical constituents – carbohydrates, proteins, lipids, saponins, tannins, flavonoids, alkaloids, glycosides, and steroids. Additionally, the plant contains various active compounds like 1,2,4-trioxolane-2-octanic acid, ricinolenic acid, and oleic acid. Other identified compounds include pinitol, β-sitosterol, and various glucuronides.

Plant Taxonomy Kingdom: Plantae

Phylum: Tracheophyta **Class:** Magnoliopsida **Order:** Sapindales **Family:** Sapindaceae

Genus: Cardiospermum

Species: Cardiospermum halicacabum.

Effect of drug – Antiallergic, Antifungal, Mild laxative, Diuretic

Parts used – leaves and roots

Mechanism of action – Cardiospermum halicacabum is a plant traditionally used for various ailments, including some that affect reproductive health, but there is no scientific evidence to support its use for inducing abortion or its mechanism of action in such a context.

Uses – Arthritis, skin disease, asthma, allergies, wound healing

Contraindications – Skin irritation (topical use), Allergic reactions.

36. Carica papaya (Papaya)

Marathi Name: पपई
Synonyms: Erand karkati
Botanical Name: Carica papaya
Family: Caricaceae
Chemical Constituents: Papain, chymopapain
Effect of Drug: Uterine stimulant
MOA: Cervical softening, uterine contraction
Uses: Abortifacient, digestive aid
Contraindications: Miscarriage risk.

37. Carthamus tinctorius.

Marathi name- करडई **Synonyms** –Safflower, false saffron, dyer's saffron, and benibana flower

Biological name – Carthamus tinctorius

Family – Daisy family

Chemical constituents – flavonoids, phenylethanoid glycosides, coumarins, fatty acids, steroids, and polysaccharide

Part used- Leaves and seeds, flowers

Effect of drug – promote blood circulation, relieve pain, and has antioxidant, anti-inflammatory, and antitumor activities

Mechanism of action – cardiovascular, anti-inflammatory, and neuroprotective properties.

Uses-Use in treating coronary heart disease, angina pectoris, gynecologic disease, stroke, and hypertension (30).

Contraindications – Pregnancy, bleeding disorders, and allergies.

38. Cassia fistula

Marathi Name- बहावा (Bahava), अमलतास (Amaltas)

Synonyms – golden shower or Indian laburnum, Bactyrilobium fistula, Cathartocarpus fistula, and pudding- pipe tree. common names include golden shower tree, purging cassia, and Indian laburnum.

Biological name –Bactyrilobium fistula

Family –Fabaceae

Chemical constituents –anthraquinones, flavonoids, tannins, and glycosides.

Plant Taxonomy – Domain -Eukaryota, Kingdom- Plantae, Phylum- Spermatophyta, Subphylum- Angiospermae, Class - Dicotyledonae, Order- Fabales, Family -Fabaceae, Subfamily- Caesalpinioideae, Genus -Cassia, Species- Cassia fistula.

Effect of drug – Abortifacient, Uterine stimulant, antioxidant

Part used-fruit and flowers

Mechanism of action-The strong purgative action may indirectly Stimulate uterine muscles due to increased intra- abdominal pressure or irritation of pelvic organs.

Uses- Constipation, liver disorder, skin disorder, anti - inflammatory

Contraindications -strong purgative effect, Gastrointestinal disorder. longa.

39. Catharanthus roseus (Sadaphuli)

Marathi Name: सदाफुली

Synonyms: Madagascar periwinkle

Botanical Name: Catharanthus roseus

Family: Apocynaceae

Chemical Constituents: Vincristine, reserpine

Effect of Drug: Cytotoxic, anticancer

MOA: Inhibits cell division

Uses: Cancer, diabetes

Contraindications: Pregnancy.

40. Caulophyllum Thalictroides roots

Marathi name – Not commonly used in Marathi; referred to by English name "Blue Cohosh"

Synonyms – Blue Cohosh, Squaw root, Papoose root **Biological name** – Caulophyllum thalictroides **Family** – Berberidaceae

Chemical constituents – Alkaloids (caulophylline, magnoflorine), saponins, glycosides

Effect of drug – Uterine stimulant, antispasmodic, emmenagogue

Part used – Root and rhizome

Mechanism of action – Stimulates uterine contractions and relieves smooth muscle spasms

Uses – Traditionally used to induce labor, regulate menstruation, relieve menstrual cramps

Contraindications – Pregnancy Should not be used before full- term labor due to strong uterine effects – Toxicity: High doses may cause vomiting, hypertension, or heart issues – Should only be used under medical supervision.

41. Celosia argentea linn

Marathi name: kurdu कद

Synonyms: Celosia cristata, Celosia plumosa, lagos spinach.

Biological name: Celosia argentea linn

Family: Amaranthaceae

Chemical constituents: Saponins, flavonoids (quercetin, kaempferol. derivatives), Triterpenoids.

Effect of drug: Hemostatic, mild emmenagogue

Part used: Seeds

MOA: mildly stimulate uterine muscle, helping regulate menstruation & it cause abortion

Uses: 1) help regulate menstrual flaw 2) Hepatoprotective

Contraindication: 1) known allergy from Amaranthaceae family plants. 2)Avoid during pregnancy.

42. Chamaemelum nobile flower

Marathi name – कॅमोमाइल (Chamomile), रोमन कॅमोमाइल (Roman Chamomile)

Synonyms – Roman chamomile, English chamomile, garden chamomile

Biological name – Chamaemelum nobile

Family – Asteraceae

Chemical constituents – Flavonoids (apigenin), sesquiterpenes (chamazulene, bisabolol), coumarins, essential oils

Effect of drug – Acts as anti-inflammatory, antispasmodic, mild sedative, carminative, antibacterial

Part used – Flowers

Mechanism of action – Modulates GABA receptors (calming effect), inhibits prostaglandins (reduces inflammation), antioxidant action

Uses –Indigestion, gas, bloating, Anxiety, stress, insomnia, Skin issues like eczema and rashes, Menstrual cramps and mild pain

Contraindications –Allergy to Asteraceae family (ragweed, daisies, marigold) Caution in pregnancy and breastfeeding Interaction with blood thinners, sedatives, hormone therapy.

43. Michelia champaca

Marathi name – चंपा

Synonyms – Golden Champa, Champak **Biological name** – Michelia champaca

Family – Magnoliaceae

Chemical constituents – Alkaloids, linalool, sesquiterpenes, saponins

Effect of drug – Aromatic, calming, anti-inflammatory **Part used** – Flowers, bark

Mechanism of action – Acts as sedative and astringent; reduces anxiety

Uses – Headache, stress, skin care, perfumery

Contraindications – None well-documented; avoid high oral doses.

44. China rose

Synonyms: Shoe Flower, Chinese Hibiscus **Biological name:** Hibiscus rosa-sinensis L. **Family**: Malvaceae

Chemical Constituents: The flowers and leaves contain anthocyanins (e.g., cyanidin-3-sophoroside), flavonoids (quercetin, kaempferol), phenolic acids, mucilages, polysaccharides, tannins, volatile oils, and alkaloids. These compounds contribute to uterine stimulating and uterotonic effects.

Plant Taxonomy Kingdom: Plantae **Division:** Magnoliophyta

Class: Magnoliopsida **Subclass:** Dilleniidae **Order:** Malvales **Family:** Malvaceae
Genus: Hibiscus

Species: Hibiscus rosa-sinensis

Effect of drug: Uterine stimulant, emmenagogue, mild diaphoretic, antibacterial.

Parts used: Flowers, leaves

MOA: Flavonoids and anthocyanins may promote uterine contractions by relaxing smooth muscle tone and encouraging menstrual flow.

Uses: Traditionally used to intensify menstrual bleeding, relieve constipation, reduce fever, and treat wounds and skin infections.

Contraindication: Avoid during pregnancy and menstruation; possible GI irritation or allergic response

45. Chrysopogon zizanoides root

Marathi name – वाळा, खस

Synonyms – Vetiver, Khus, Ushira

Biological name – Chrysopogon zizanoides

Family – Poaceae

Chemical constituents – Vetiverol, vetivone, khusimol, terpenoids, essential oils

Effect of drug – Cooling, anti-inflammatory, antimicrobial, antioxidant

Part used – Roots

Mechanism of action – Soothes the nervous system, reduces inflammation, promotes cooling and detoxification

Uses – Skin conditions (acne, burns) Fever and heatstroke Nervous tension, insomnia Aromatherapy and perfumery

Contraindications –Excessive internal use may lead to dehydration Not recommended in cold-related conditions or during winter internally

46. Cinnamomum camphora (Kapoor)

Marathi Name: Kaapur

Synonyms: Camphor tree, laurel

Botanical Name: Cinnamomum camphora

Family: Lauraceae

Chemical Constituents: Camphor, cineol, safrole

Effect of Drug: Contraceptive, uterotrophic

MOA: Crosses placenta, affects fetal enzymes

Uses: Abortion, cough, dysentery

Contraindications: Seizures, liver disease

47. Citrullus colocynthis

Marathi name – इंद्री

Synonyms – Bitter apple, Colocynth, Desert gourd

Biological name – Citrullus colocynthis

Family – Cucurbitaceae

Chemical constituents – Cucurbitacins, alkaloids, resins, glycosides

Effect of drug – Strong purgative, anti-inflammatory, anthelmintic

Part used – Dried pulp of fruit

Mechanism of action – Stimulates bowel peristalsis, reduces inflammation

Uses – Constipation, arthritis, worms

Contraindications – Pregnancy, gastrointestinal inflammation, not for long term use

48. Commiphora myrrha

Marathi Name: हरबोळ, (Hirabol)

Synonyms: Balsamodendron myrrhae, commiphora mal mol.

Biological name: Commiphora myrrha

family: Burseraceae

Chemical continents: essential oil, resins, water soluble gum. It contains several bioactive metabolites such as flavonoids, terpenoids, Steroids, lignans, carbohydrates long chain aliphatic alcohol derivatives

Effect of drug: uterine stimulant **Part used:** bark

MOA: Myrrh can stimulate the uterus & might cause the miscarriage

Contraindication: large amount can cause kidney Irritation & heart rate changes

49. Coriandrum sativum (Dhanyaka)

Marathi Name: धणे

Synonyms: Coriander

Botanical Name: Coriandrum sativum

Family: Apiaceae

Chemical Constituents: Linalool, geraniol

Effect of Drug: Mild uterine stimulant

MOA: Smooth muscle stimulant

Uses: Carminative, digestion

Contraindications: Early pregnancy

50. Crocus sativus (Kesar)

Marathi Name: केशर

Synonyms: Saffron

Botanical Name: Crocus sativus

Family: Iridaceae

Chemical Constituents: Crocin, safranal

Effect of Drug: Uterine stimulant (high doses)

MOA: Serotonin-like stimulation of uterus

Uses: Amenorrhea, complexion enhancer

Contraindications: Overdose causes miscarriage

51. Curculigo orchioides (Kali Musli)

Marathi Name: काळी मुसळी

Synonyms: Black Musli

Botanical Name: Curculigo orchioides

Family: Hypoxidaceae

Chemical Constituents: Curculigosides, saponins

Effect of Drug: Antifertility agent

MOA: Estrogenic; disrupts implantation

Uses: Aphrodisiac, reproductive tonic

Contraindications: Pregnancy

52. Curcuma

Marathi Name: Halad

Chemical constituents – curcumin, demethoxycurcumin, and bisdemethoxycurcumin. In addition to curcuminoids, turmeric also contains sesquiterpenes like curcumenone, dehydrocurdione, and arturmerone, as well as other compounds like curlone, α-turmerone, βturmerone, and terpinolene. **Plant Taxonomy Kingdom:** Plantae **Phylum:** Tracheophyta **Class:** Magnoliopsida

Order: Zingiberales **Family:** Zingiberaceae **Genus:** Curcuma **Species:** Curcuma longa.

Effect of drug –Uterotonic (abortifacient), anti-inflammatory, antioxidant, antimicrobial effect.

Part used- leaves, stem rhizome.

Mechanism of action –Curcuma longa may stimulate uterine contractions by affecting prostaglandin pathways, which is why it is traditionally associated with emmenagogue or abortifacient effects in high doses.

Uses-Gastrointestinal disorders, Liver protection, induce menstruation.

Contraindications - pregnancy, bleeding disorder

53. Cuscuta reflexa

Marathi Name: आकाशवेल or अमरवेल

Synonyms: Dodder, Cuscuta elatior Choisy. **Biological Name:** Cuscuta reflexa Roxb.

Family: Convolvulaceae

Chemical Constituents: flavonoids, coumarins, phenylpropanoids, triterpenoids, and cardiac glycosides

Plant Taxonomy - Domain: Eukaryota, **Kingdom:** Plantae, **Phylum:** Tracheophyta,

Class: Magnoliopsida, Order: Solanales, **Family:** Convolvulaceae, **Genus:** Cuscuta, **Species:** Cuscuta reflexa

Effect of Drug: Antispasmodic, antifertility, anticonvulsant, anti-inflammatory, CNS depressant.

Parts Used: Stems, seeds, flower.

Mechanism of action - increase uterine carbonic anhydrase and progesterone, leading to antifertility/abortifacient effects; flavonoids and triterpenes exert muscle relaxation and anti-inflammatory actions.

Uses: Used in folk medicine as emmenagogue, abortifacient, anti-diarrheal, anticonvulsant, detoxifier, and for treating fevers and aches.

Contraindication: Pregnancy Action in epilepsy due to CNS effects; avoid in gastrointestinal disorders due to spasmolytic potency

54. Cyclea burmanni

Marathi Name: मोठी पहाडवल (Mothi Pahadval) थोरली पाडावळ (Thorali Padaval)., धाकटी पाडावळ (Dhakati Padaval).

Synonyms: Cyclea peltata

Biological Name: Cyclea burmanni

Family: Menispermaceae

Chemical Constituents: alkaloids like furanoline, tetrandrine, cycleanorine, cycleacurine, cycleapeltine, cycleadrine, and Disochondrodendrine. The plant also contains steroids, phenols, tannins, and flavonoids.

Plant Taxonomy Kingdom: Plantae **Phylum:** Tracheophyta **Class:** Angiosperms **Order:** Ranunculales **Family:** Menispermaceae **Genus:** Cyclea **Species:** C. peltata

Effect of Drug: Estrogenic, emmenagogue, abortifacient. **Parts Used:** Roots

MOA: Contains estrogenic compounds that enlarge uterine tissue and disrupt implantation; direct uterine contraction activity

Uses: Used traditionally as contraceptive and abortifacient; also, for menstrual disorders.

Contraindication: estrogen-sensitive conditions (breast/prostate cancers); hormonal imbalance disorders

55. Cytisus scoparius (Scotch Broom)

Marathi Name: भट्याई

Synonyms: Scotch broom

Botanical Name: Cytisus scoparius

Family: Fabaceae

Chemical Constituents: Sparteine, scoparin

Effect of Drug: Uterotonic, diuretic

MOA: Stimulates cardiac and uterine muscles

Uses: Edema, labor support

Contraindications: Pregnancy (unless supervised)

56. Dalimb

Marathi name: डाळिंब (Dalimb)

Synonyms: Pomegranate

Biological name: Punica granatum L.,amygdalin

Family: Lythraceae (Punicaceae)

Chemical Constituents: The fruit rind, seeds, and bark contain tannins (punicalagins, ellagitannins), anthocyanins, flavonoids, alkaloids, phenolic acids, and fatty oils. The rind is especially rich in ellagitannins, which support anti-inflammatory and astringent effects, and has been traditionally used in uterine disorders.

Plant Taxonomy Kingdom: Plantae **Clade:** Tracheophytes (vascular plants) **Clade:** Angiosperms (flowering plants) **Clade:** Eudicots **Clade:** Asterids

Order: Asterales

Family: Asteraceae (daisy family)

Genus: Dahlia

Species: Dahlia pinnata

Effect of drug: Astringent, emmenagogue, uterine tonic, antidiarrheal, anti-inflammatory.

Parts used: Fruit, seeds, flowers, stem bark, roots

MOA: Tannins and phenolics contract uterine tissue and can stimulate menstrual flow or disrupt early pregnancy; astringent effects treat diarrhea and uterine irritation.

Uses: Used in uterine disorders, dysentery, diarrhea, colitis, menstrual disorders; also, as general tonic and antihelmintic.

Contraindication: Should not be used during pregnancy or menstruation; use with caution in gastrointestinal sensitivity

57. Daucus carota l

Marathi Name: गाजर बी

Synonyms: wild carrot or queen Anne's lace **Biological name:** Daucus Carota L.

Family: Apiaceae

Active ingredient: Carotenoids & phenolic compounds like flavonoids

Plant part used: seeds

Effect: uterine contraction

Uses: diuretic, emmenagogue, abortion, anti-inflammatory

Contraindication: affect blood pressure, and trigger allergic reaction

58. Datura stramonium (Dhotra)

Marathi Name: Dhotra

Synonyms: Devil's trumpet, thornapple **Botanical Name:** Datura stramonium

Family: Solanaceae

Chemical Constituents: Hyoscyamine, atropine

Effect of Drug: Abortifacient, uterine stimulant

MOA: Blocks acetylcholine, causes miscarriage

Uses: Cough, bronchitis, abortion

Contraindications: Hallucinations, coma

59. Dronapushpi (Leucas cephalotes)

Marathi Name: Tumbi **Synonyms:** Dronapushpa, Guma

Botanical Name: Leucas cephalotes **Family:** Lamiaceae

Chemical Constituents: Ursolic acid, nicotine

Effect of Drug: Emmenagogue

MOA: Anti-estrogenic, uterine stimulation

Uses: Amenorrhoea, abortion

Contraindications: Headache, nausea

60. Embelia ribes (Vidanga)

Marathi Name: मरी

Synonyms: Krimighna, chitratandula, amogha, krimighna, jantunashna, tandula, vellama, chitratandula

Biological Name: Embelia ribes Burm.f

Family: Myrsinaceae

Chemical Constituents: The dried berries of Embelia ribes contain embelin, a potent bioactive benzoquinone, along with other phenolic compounds, volatile oils, and tannins. Embelin has demonstrated anthelmintic, antioxidant, anti-inflammatory, antimicrobial, and antifertility effects. Its antifertility and uterotonic actions are attributed to embelin's ability to influence hormonal balance and myometrial (uterine muscle) activity.

Plant Taxonomy Kingdom: Plantae **Phylum:** Tracheophyta **Class:** Magnoliopsida

Order: Ericales **Family:** Myrsinaceae (or Primulaceae)

Genus: Embelia **Species:** Embelia ribes Burm. f.

Effect of Drug: Anthelmintic, antifertility, emmenagogue, abortifacient, digestive aid.

Parts Used: Dried berries (seeds).

MOA: Embelin likely interferes with embryo implantations and stimulates uterine contractions; hormonal modulation and local uterotonic effects are implicated.

Uses: Traditionally used for deworming, indigestion, cough, throat infections, obesity management, skin disorders, and as an agent to stimulate menstruation or terminate pregnancy.

Contraindication: Caution in individuals with hormonal disorders or GI sensitivity; potential hepatotoxicity in high doses or prolonged use.

61. Euphorbia tirucalli

Marathi name – दधी झाड

Synonyms – Pencil tree, Milk bush, Indian tree spurge

Biological name – Euphorbia tirucalli

Family – Euphorbiaceae

Chemical constituents – Euphol, triterpenoids, diterpenes, latex

Effect of drug – Purgative, antimicrobial, anticancer (in folk use)

Part used – Latex, stem

Mechanism of action – Latex causes irritation and immune response stimulation

Uses – Skin issues, warts, traditional cancer remedy

Contraindications – Toxic latex; avoid internal use; use with caution on skin

62. Ferula asafoetida (Hingu)

Marathi name: हग

Synonyms: Asafoetida

Biological name: Ferula asafoetida

Family: Apiaceae

Chemical Constituents: Composed of ferulic acid esters, volatile sulfur compounds (disulfides), sesquiterpenes, and coumarins. The resin's strong smell and spasmogenic oils can stimulate the uterus and relieve gas.

Effect of drug: Mild uterine stimulant and emmenagogue

Part used: Oleogum resin

MOA: Stimulates smooth muscle of uterus and GI tract via volatile oils

Uses: Flatulence, hysteria, delayed menstruation

Contraindications: Avoid during pregnancy unless prescribed; may increase bleeding risk

63. Feverfew

Marathi Name: गाजर गवत

Synonyms: bachelor's buttons, maids, manzanilla

Biological name: Feverfew

Family: Asteraceae

Active ingredient: parthenolide **Part used:** flowers & leaves

MOA: Stimulate uterine contractions and potentially interfere with implantation, leading to miscarriage

Uses: reducing fever, easing menstrual cramps & treating headache

Contraindication: Feverfew is contraindicated in pregnant women as it may cause the uterus to contract Feverfew is not recommended for children or for women who are breastfeeding.

64. Foeniculum vulgare (Mishreya)

Marathi name: बडीशप

Synonyms: Fennel

Biological name: Foeniculum vulgare

Family: Apiaceae

Chemical Constituents: Includes anethole (main), estragole, fenchone, and limonene. Anethole acts as a phytoestrogen and uterine stimulant, and is responsible for its emmenagogue and lactogogue actions.

Effect of drug: Uterine stimulant and lactation promoter

Part used: Seeds

MOA: Anethole mimics estrogen and stimulates uterine and mammary glands

Uses: Dysmenorrhoea, digestive issues, lactation enhancer

Contraindications: High doses may be unsafe in early pregnancy

65. Gloriosa superba L.

Marathi name – अग्निशिखा (Agnishikha)

Synonyms – Flame lily, Glory lily, Kalihari **Biological name** – Gloriosa superba

Family – Colchicaceae

Chemical constituents – Colchicine, gloriosine, superbine

Effect of drug – Abortifacient, anti-inflammatory, anticancer

Part used – Tubers, roots

Mechanism of action – Inhibits cell division (antimitotic), anti- inflammatory activity

Uses – Gout, arthritis, infertility treatment (traditional), cancer research

Contraindications – Extremely toxic, pregnancy, should only be used under strict medical supervision

66. Gossypium

Marathi name – कापूस

Synonyms – Cotton

Biological name – Gossypium herbaceum / Gossypium hirsutum

Family – Malvaceae

Chemical constituents – Gossypol, flavonoids, tannins, essential oils

Effect of drug – Emmenagogue, uterotonic, antifertility agent

Part used – Root bark, seeds

Mechanism of action – Affects reproductive hormones and uterine contractions

Uses – Menstrual regulation, contraception (traditional), anti- inflammatory

Contraindications – Pregnancy, male infertility (gossypol reduces sperm count), overdose

67. Guaiacum officinale

Marathi Name: गुआयाक' or 'दलिम दवटा' (Lignum Vitae)

Synonyms: Guaiac wood, and Pockholz

Biological Name: Roughbark lignum-vitae, guaiacwood

Family: Zygophyllaceae

Chemical Constituents: The resin contains guaiaconic acids, volatile oils, and phenolic compounds. • **Plant Taxonomy – Kingdom**: Plantae (Plants)

Clade: Tracheophytes (Vascular plants) **Clade:** Angiosperms (Flowering plants) **Clade:** Eudicots

Order: Zygophyllales **Family:** Zygophyllaceae (Caltrop family)

Genus: Guaiacum

Species: Guaiacum officinale L.

Effect of Drug: Uterine stimulant; anti-inflammatory; diaphoretic.

Parts Used: Resin (gum) and heartwood

MOA: Stimulates uterine muscles via local irritant and emmenagogue action.

Uses: Historically used to induce menstruation and abortion; also applied for gout, rheumatism, and sore throats.

Contraindication: avoid during menstruation; may irritate GI mucosa; hypersensitivity to resin.

68. Guduchi

Synonyms- Amrutalata, Vamsa, Gulvel, Amritavel, Gulancha.

Biological Name- Tinospora Cordifolia

Family- Menispermaceae.

Plant part used- Roots, steam, leaves.

Chemical constituents- Giloin, gilenin, gilsterol, alkaloids- tinosporin, tinosporal, potassium, calcium, phosphorus, beberin, palmatin, lignin.

Uses- In rheumatism, urinary diseases, dyspepsia, abortifacient, contraceptive, antioxidant, etc.

Mechanism of Action- Cordifolia root extract of guduchi attenuated the brain mediated lipid level and down regulated the blood glucose and urinary glucose level.

Contraindications- Pregnancy, breastfeeding, hypersensitivity.

69. Haritaki

Marathi name: हरतकी

Synonyms: Chebulic myrobalan, Abhaya **Biological name:** Terminalia chebula

Family: Combretaceae

Chemical Constituents: Contains chebulagic acid, chebulinic acid, gallic acid, tannins, and anthraquinones. These substances act as mild laxatives and astringents and may influence uterine peristalsis when used in high doses.

Effect of drug: Mild uterine stimulant in high doses

Part used: Fruit pericarp

MOA: Indirect stimulation via GI-induced prostaglandins

Uses: Digestive, rejuvenator (Triphala), laxative

Contraindications: Excessive use can cause dehydration

70. Heracleum persicum

Marathi Name: शप

Synonyms: galpar or Persian hogweed, Tromso Palm

Biological name: heracleum persicum

Family: Apiaceae

Chemical constituents: Various natural chemicals such as volatile (terpenes, aliphatic, esters, phenyl propenes & carbonyls) & non-volatile constituents. & Several minerals were identified during phytochemical analysis.

Effect of drug: Contraceptive, lactagogue, emmenagogue & painkiller agents.

Part used: Dried fruit

MOA: Increasing estrogen & reducing progesterone by abortion induction

Contraindication: Liver damage, and avoid during Pregnancy

71. Ispaghol

Synonyms- Desert Indian wheat, Blond psyllium.

Biological Name- Plantago ovata.

Family- Plantaginaceae.

Plant part used- Seed, ispagol husk

Chemical constituents- Mucilage (30%), hemicellulose, flavonoids, anticosides, tannins, fatty acid.

Uses- Used as abortifacient, constipation, diarrhea, irritable bowel syndrome, ulcerative colitis, etc.

Mechanism of Action- Stimulates contraindication & peristaltic movements because of mild laxative nature which helps in easy expulsion stools.

Contraindications- Dehydration allergy, pregnancy & lactation Intestinal blockage, etc.

72. Japa (Hibiscus rosa-sinensis)

Marathi Name: Jaswand

Synonyms: japu,japa,gurhal, Japapushpa, Gudhal

Botanical Name: Hibiscus rosa-sinensis

Family: Malvaceae

Chemical Constituents: Tannins, saponins, glycosides, flavonoids, and terpenoids. Quercetin, kaempferol, and anthocyanins. Contains L-rhamnose and D- galactose. Anthraquinones, quinines, phenols, alkaloids, cardiac glycosides, protein, free amino acids, carbohydrates, reducing sugars, essential oils, and steroids.

Parts used: Flower, leaves

Effect of drug: anti-implantation, uterine contractions

MOA: delay or prevent implantation and interrupt pregnancy. This may be due to hormonal changes or other factors affecting the uterine lining or the developing embryo. Uterine contractions, potentially causing the expulsion of the embryo or fetus.

Uses: lowering blood pressure, regulating blood sugar, and acting as an antioxidant, abortion

Contraindications: drop in blood pressure, allergic reaction, gastrointestinal issue.

73. Jatropha curcas

Marathi Name: Mogali Erand (मोगली एरड)Ratanjyot (रतनज्योत)

Synonyms: Manihot curcas (L.) Crantz, Curcas purgans Medic., and Castiglionia lobata Ruiz & Pav.. Other names include Barbados nut, bubble bush

Biological Name: Jatropha curcas.L, physic nut

Family: Euphorbiaceae

Chemical Constituents: diterpenoids, sesquiterpenoids, triterpenes, lignans, coumarins, flavonoids, alkaloids, phytosterols, saponins, tannins, and various fatty acids. The seed oil is particularly rich in oleic acid, linoleic acid, palmitic acid, and stearic acid.

Plant Taxonomy Kingdom: Plantae (Plants)

Phylum: Tracheophyta (Vascular plants)

Class: Magnoliopsida (Dicotyledons)

Order: Malpighiales

Family: Euphorbiaceae (Spurge family)

Genus: Jatropha

Species: Jatropha curcas L.

Effect of Drug: Abortifacient, purgative, cytotoxic, anti- inflammatory, antimicrobial.

Parts Used: Fruits, seeds, leaves, roots, latex

MOA: Uterine resorption observed via cytotoxic diterpenoid jatrophone and phorbol esters; emmenagogue via purgative- laxative induced hormonal changes.

Uses: used as abortifacient, purgative, contraceptive, antimicrobial, and in wound healing.

Contraindication: Internal use contraindicated due to seed toxicity, GI damage

74. Juniperus sabina

Marathi name: सॅबीन जुनिपर (Cossack juniper)

Synonyms: Savin, procumbent, dwarf Juniper

Biological name: Juniperus sabina

family: Cupressaceae

Chemical Constituents: The abortive. qualities are generally attributed to essential oils, particularly Sabinyl acetate which effectively prevents implantation.

Effect of drug: abortifacient, stimulate menstrual flow

Part used: leaves or berries

MOA: They showed that J. Sabina could cause corpus luteum (atrophic Follicles to increase & graafian follicles & primary follicle to decrease which can have undesirable effects on implantation & the number size of the ovum

Contraindication: Avoids during pregnancy

75. Juniperus virginiana (leaf berry)

Marathi name – जननपर

Synonyms – Eastern red cedar, red juniper **Biological name**: Juniperus virginiana

Family – Cupressaceae

Chemical constituents – Volatile oils, flavonoids, sesquiterpenes

Effect of drug – Antiseptic, diuretic, expectorant

Part used – Leaf and berry

Mechanism of action – Promotes urination, kills microbes, clears respiratory tract

Uses – Urinary tract infections, cold and cough, arthritis

Contraindications – Pregnancy, kidney disorder

76. Kadamba (Neolamarckia cadamba)

Marathi name: kadamb,kalamb

Synonyms: Halipriya, Nipa, Vrittapushpa, Priyaka, Sindhupushpa, Kadambarya, and Burflower tree

Botanical Name: Neolamarckia cadamba

Family: Rubiaceae

Chemical Constituents: alkaloids, terpenoids, flavonoids, saponins, and triterpenoid glycosides. Specifically, it contains cadambine, isocadambine, isodihydrocadambine, and two non-glycosidic alkaloids, cadamine and isocadamine. The flowers also contain essential oils with components like linalool, geraniol, and curcumene.

Parts Used: bark,leaves,fruit

Effect of drug: estrogenicity, luteolysis

MOA: disrupting the uterine environment, altering hormone levels (including estrogenicity), causing luteolysis (the breakdown of the corpus luteum, which produces progesterone), and potentially affecting the uterine epithelium.

Uses: regulate blood sugar level, antidote, reduces inflammation, abortion, improve liver health

Contraindications: heart burn, throat irritation, skin irritation

77. Katphala

Marathi name: कटफळ

Synonyms: Bayberry, Katphala Biological name: Myrica nagi Family: Myricaceae

Chemical Constituents: Contains tannins, glycosides (myricadiol), flavonoids, and myricetin. These act as astringents and may tone uterine muscles indirectly.

Effect of drug: Uterine astringent

Part used: Bark

MOA: Astringent tannins cause contraction of mucosal surfaces and possibly uterine tissues

Uses: Diarrhea, uterine bleeding, leukorrhea

Contraindications: Avoid in pregnancy due to potential uterine stimulation

78. Kupilu (Nuxvomica)

Synonyms- Kuchla.

Biological Name- Strychnos Nuxvomica

Family- Loganiacede.

Chemical constituents- Strychnine, Brucine, Vomicne, Navacine, Isostrychnine, cuchiloside and Loganic acid.

Uses- For erectile dysfunction, swelling of stomach, constipation, abortifacient, etc.

Mechanism of Action- Nuxvomica contains strychnine and other chemicals that affect the brain and cause muscle contraction.

Contraindications- In pregnancy and breast feeding, Liver-diseases.

79. Lantana camara

Marathi name - घाणेरी or टणटणी

Synonyms – Lantana, Wild sage

Biological name – Lantana camara

Family – Verbenaceae

Chemical constituents – Lantadene A and B, essential oils, flavonoids

Effect of drug – Antimicrobial, anti-inflammatory, wound healing

Part used – Leaves, flowers

Mechanism of action – Reduces microbial activity and inflammation at local site

Uses – Skin infections, cuts, wounds, boils

Contraindications – Toxic to livestock and humans if ingested in excess

80. Latakaranja (Caesalpinia crista)

Marathi Name: gajjga, sagargota

Synonyms: Fever nut, bonduc nut, kuberaksha, putikaranja, vitapakaranja

Botanical Name: Caesalpinia crista **Family:** Fabaceae

Chemical constituents: bonducin, heptacosane, phytosterols, alkaloids, flavonoids, triterpenoids, proteins, saponins, steroids, tannins, and glycosides. Additionally, it is known to have diterpenoids of the cassane and norcassane types. Other compounds found in various extracts include coumarins, carbohydrates, reducing sugars, and fatty acids

Parts used: leaf, roots, seed

Effect of drug: uterine contractant, antifertility effect

MOA: compounds like flavonoids and phenolic compounds, found in the plant, may contribute to its effects on the reproductive system, potentially inducing uterine contractions and expulsion of fetal tissue.

Uses: Treat diabetes, leprosy, malaria, bowel syndrome and abortion

Contraindications: nausea, vomiting.

81. Lawsonia inermis

Marathi Name: Henna मेहंदी

Synonyms: lawsonia alba Lam, Lawsonia speciosa L.

Biological Name: lawsonia inermis

Family: Lythraceae

Chemical constituents: This plant contains quinones, phenylpropanoid lavonoids, terpenoids, phenolic Compounds, & fatty acids. Apigenin is a flavonoid that exists in aromatic vegetables like henna.

Effect of drug: teratogenic, abortifacient **Part used:** leaves

MOA: Increase estrogen & decreases progesterone level which induced abortion

Uses: It is used for as dye It is used as an abortifacient in Persian medicine.

Contraindication: It is contraindicated during pregnancy, and Skin irritation

82. Mallotus philippensis

Marathi name: कपिला (Kapila), केशरी (Kesari), or शेंदरी (Shendri).

Synonyms: Kamala, Monkey face tree **Biological name:** Mallotus philippensis

Family: Euphorbiaceae

Chemical Constituents: Contains rottlerin, chalcones, iso- rottlerin, and polyphenols. Rottlerin is a bioactive compound with cytotoxic and anti-implantation activity, making it potentially useful as an abortifacient.

Effect of drug: Embryotoxic and antifertility

Part used: Glandular red powder (from fruit capsules)

MOA: Prevents implantation and damages uterine lining in high dose

Uses: Anthelmintic, skin diseases, liver tonic

Contraindications: Not safe during pregnancy; may cause GI irritation in overdose

83. Matricaria chamomilla

Marathi Name: शेविंती(shevanti)

Synonyms: German chamomile, blue chamomile, scented mayweed

Biological name: Matricaria chamomilla **Family:** Asteraceae

Chemical constituents: Chamomile contain flavonoids, coumarins, volatile oils, terpenes, Sterols, organic acids & polysaccharides.

Effect of drug: sedative, pain relief

Part used: flowers.

MOA: decrease in the serum levels of estrogen, progesterone luteinizing hormone (LH). follicular stimulating hormone (FSH) & also cause uterine contraction invoking miscarriage in pregnant women.

Uses: 1) Traditional abortion medicine 2) It is used as an antioxidant.

Contraindication: Allergic people should avoid pregnant women should avoid it.

84. Mentha pulegium leaf essential oil

Marathi name – पुदिना

Synonyms – Pennyroyal mint

Biological name – Mentha pulegium

Family – Lamiaceae

Chemical constituents – Pulegone, menthone, isomenthone

Effect of drug – Abortifacient, insect repellent, digestive stimulant

Part used – Leaves and essential oil

Mechanism of action – Stimulates uterine muscle, affects the liver enzymes

Uses – Menstrual issues, aromatherapy, insect repellent

Contraindications – Pregnancy, liver disorders, children (toxic in high doses)

85. Mesua ferrea (Nagkesar)

Marathi name: नागकसर

Synonyms: Ceylon ironwood

Biological name: Mesua ferrea

Family: Calophyllaceae

Chemical Constituents: Contains xanthones (mesuaxanthone), ferulic acid, tannins, and volatile oils. These compounds give it haemostatic and antioxidant properties. Though not primarily a uterine stimulant, the presence of astringent principles can influence uterine tone. Effect of drug: Not direct abortifacient; used for controlling bleeding

Part used: Flowers (stamens)

MOA: Astringent and haemostatic; may support contraction indirectly

Uses: Menorrhagia, haemostatic, ulcers

Contraindications: None significant; avoid in constipation due to astringent action

86. Michelia champaca

Marathi name – चपा

Synonyms – Golden Champa, Champak **Biological name** – Michelia champaca Family – Magnoliaceae

Chemical constituents – Alkaloids, linalool, sesquiterpenes, saponins

Effect of drug – Aromatic, calming, anti-inflammatory

Part used – Flowers, bark

Mechanism of action – Acts as sedative and astringent; reduces anxiety

Uses – Headache, stress, skin care, perfumery

Contraindications – None well-documented; avoid high oral doses

87. Momordica dioica

Marathi name – करटोली

Synonyms – Spiny gourd, Small bitter gourd

Biological name – Momordica dioica Family – Cucurbitaceae

Chemical constituents – Saponins, alkaloids, flavonoids

Effect of drug – Antidiabetic, antioxidant, hepatoprotective

Part used – Fruit, roots

Mechanism of action – Regulates blood sugar and liver enzymes

Uses – Diabetes, liver problems, digestive issues

Contraindications – Caution in hypoglycemic patients, avoid during pregnancy

88. Moringa oleifera Lam

Marathi name: shevga ((शेवगा))

Synonyms: Drumstick tree, Horseradish tree, sahijan, shigru

Biological name: Moringa oleifera lam.

Family: Moringacede

Chemical constituents: Moringa oleifera contain alkaloids (like moringinine) & spirochin, which have been reported in traditional medicine to act as a uterine stimulant.

Effect of drug: smooth muscle Stimulant

Part used: Roots & bark

MOA: It might stimulate uterine smooth muscle, leading to increased uterine tone or contractions.

Uses: 1) It is primarily used for nutritice anemia, inflammation, blood pressure etc.

Contraindication: 1) Avoid during pregnancy

89. Nakuli / Sarpagandha

Marathi name: सर्पगंधा

Synonyms: Indian snakeroot, Chandrabhaga **Biological name:** Rauvolfia serpentina

Family: Apocynaceae

Chemical Constituents: Contains indole alkaloids such as reserpine, rescinnamine, serpentine, ajmaline, and yohimbine. These alkaloids act on the central nervous system, lower blood pressure, and affect uterine smooth muscle tone indirectly.

Effect of drug: Mild uterine stimulant; sedative

Part used: Root

MOA: Reserpine depletes catecholamines from sympathetic nerve endings, which may secondarily influence uterine muscle tone.

Uses: Antihypertensive, sedative, mild uterotonic in traditional use

Contraindications: Pregnancy (due to uterine stimulation and hypotensive effects), depression

90. Nerium indicum mill

Marathi name: कण्हेर
Synonyms: Nerium oleander L.
Biological name: Nerium indicum mill
Family: Apocynaceae
Chemical constituents: Glycoside, oleandrin, tannin, neriin,phytoestrin & 1-strophnathin, rosagının & nerlin, volatile oil, Fixed oil, neriodorin and nerloderein.
Effect of drug: stimulates cardiac muscle.
Part used: leaves & flowers
MOA: It is used to stimulate cardiac muscles, relieve pain & eliminate blood stasis.
Uses: 1) Anti-inflammatory 2) Anti-bacterial, & anthelmintic effect
Contraindication: 1) Pregnancy & breast-feeding

91. Nigella sativa

Marathi name: काळी जीरे
Synonyms: Black seed, Black cumin
Biological name: Nigella sativa Family: Ranunculaceae
Chemical Constituents: Rich in thymoquinone, nigellone, α- hederin, and fixed oils. Thymoquinone exhibits hormone- modulating, antioxidant, and anti-inflammatory properties, contributing to its mild emmenagogue effect.
Effect of drug: Mild emmenagogue, fertility regulator
Part used: Seeds
MOA: Acts on estrogen receptors and may mildly stimulate uterine activity
Uses: Immunity booster, antihistamine, galactagogue
Contraindications: Avoid large doses during pregnancy

92. Opopanax chironium

Marathi name: गोड गूळ
Synonyms: Dorema chironium, Malabaila opoponax, opopanax glaber
Biological Name: Opopanax chironium
Family: Apiaceae
Chemical constituents: Sesquiterpenes, coumarins, phthalides & volatile oils.
Part used: stem
Effect of drug: abortifacient, effective as feticide
MOA: It contains abortifacient activity & its mixture with honey is used as a vaginal suppository, which is very effective as a feticide & for expelling the product of conception
Uses: It is used as a vaginal Suppository. It is traditional abortifacient
Contraindication. - impaired renal function

93. Oriental Arborvitae

Marathi Name: Morpankhi (मोरपिंखी) in Thuja (थजा)
Synonyms: Oriental Arborvitae, Biota, thuja orientalis, Chinese arborvitae
Biological Name: Biota, Platycladus orientalis
Family: Cupressaceae
Chemical Constituents: The essential oil (found in leaves and wood) is high in monoterpenes, mainly α- and β-thujone, sabinene, limonene, acetate, and terpinene, flavonoids, Thujones are known for uterine and neuro-stimulatory effects, terpenoids contribute antimicrobial and anti- inflammatory activity.
Plant Taxonomy Kingdom: Plantae (Plants) **Clade:** Tracheophytes (vascular plants)
Clade: Gymnosperms (conifers)
Division: Pinophyta (conifers)
Class: Pinopsida
Order: Cupressales
Family: Cupressaceae (cypress family)
Genus: Platycladus
Species: Platycladus orientalis (L.) Franco
Effect of Drug: Uterine stimulant, abortifacient, diuretic, insect repellent, antimicrobial.
Parts Used: Leaves, wood
MOA: Thujone acts as a neurotoxin and uterotonic agent triggering uterine contraction; other terpenoids may enhance smooth muscle stimulation.
Uses: Historically used as an emmenagogue, abortifacient, respiratory tonic, diuretic, and insect-repellent. Extracts also serve as antiseptics.
Contraindication: high thujone content may cause neurotoxicity (seizures, kidney/liver damage)

94. Oryza sativa L.

Marathi name – तांदळ

Synonyms – Asian rice, Paddy, Cultivated rice

Biological name – Oryza sativa

Family – Poaceae

Chemical constituents – Starch, gamma-oryzanol, amino acids, flavonoids, vitamins

Effect of drug – Nutritive, demulcent, antidiarrheal, energy booster

Part used – Seeds (rice), bran

Mechanism of action – Coats mucous membranes, provides essential nutrients

Uses – Diarrhea, malnutrition, skincare (bran water), weaning food

Contraindications – Refined white rice in excess may increase blood sugar

95. Pada (Cissampelos pareira)

Marathi Name: Pahadvel, Pahadmool, Dhakati Padaval

Synonym: Patha, Abuta, Velvet Leaf, False Pareira Brava, Pereira Root, Barbasco, Laghu Patha, Vatta-t-tiruppi, and Akanadi

Botanical Name: Cissampelos pareira

Family: Menispermaceae

Chemical constituent: Presence of alkaloids, particularly isoquinoline alkaloids. Other identified compounds include flavonoids, flavonoid glycosides, fatty acids, and other benzylisoquinoline derivatives. Specifically, the plant has been found to contain compounds like magnoflorine, magnocurarine, cissamine, curine, hayatinine, and cycleanine. A new pyrrole alkaloid, cissampeline, has also been isolated from the roots.

Effect of drugs: Anti infertility, induce premature labour

MOA: involves hormonal and lipid profile modulation, potentially impacting pregnancy. Specifically, it may affect gonadotropin release (LH, FSH, and prolactin), estradiol secretion, and the estrous cycle. Furthermore, it has shown antioxidant properties and may influence lipid metabolism, which could be relevant to its antifertility effects.

Parts used: leaves, roots

Uses: ailments, including ulcers, skin diseases, poisonous bites, and fever. It also finds use in treating diarrhea, hemorrhoids, urinary disorders, and malabsorption syndrome

Contraindications: nausea, vomiting, mild headache, kidney issue

96. Palash (Butea monosperma)

Marathi Name: palas

Synonyms: Bastard teak, Kinshuka, Raktapushpaka, Ksharshreshta, and Brahmavriksha in Sanskrit, and Dhaka

Botanical Name: Butea monosperma **Family:** Fabaceae

Chemical constituents: flavonoids like quercetin and kaempferol, tannins, sterols, and glycosides butrin, isobutrin, coreopsin, and isocoreopsin.

Parts used: seeds

Effect of drug: uterine contractant, estrogenic activity

MOA: anti-steroidogenic activity, which may also contribute to its anti-fertility effects. regulate menstrual cycles and potentially tone uterine muscles

Uses: Hemorrhoids and in Leukorrhea, hypertension, glucose metabolism, vaginal infection

Contraindications: pitta dosh, itching, swelling

97. Parsley

Marathi name – अजमोदा (पासाली)

Synonyms – Garden parsley

Biological name – Petroselinum crispum

Family – Apiaceae

Chemical constituents – Apiol, myristicin, flavonoids, vitamin

Effect of drug – Carminative, diuretic, emmenagogue

Part used – Leaves, seeds, root

Mechanism of action – Stimulates uterine muscles, increases urine output

Uses – Digestive aid, urinary infections, menstrual irregularities

Contraindications – Pregnancy (especially seed oil), kidney disorders, high doses

98. Parthenium

Marathi Name: कॉंग्रस गवत

Synonyms: congress grass **Biological name:** Parthenium **Family:** Asteraceae

Active ingredient: parthenin, a sesquiterpene lactone

Part used: leaves & flowers

MOA: Parthenium may stimulate uterine contraction

Uses: emménagogue, abortifacient

Contraindication: It should be avoid during pregnancy

99. Peganum harmala

Marathi name: हरमाल / इसबद

Synonyms: Syrian rue

Biological name: Peganum harmala **Family:** Nitrariaceae

Chemical Constituents: Contains β-carboline alkaloids such as harmine and harmaline, which act as monoamine oxidase inhibitors (MAOIs). Also includes vasicine, which has proven oxytocic and abortifacient properties. These constituents stimulate uterine muscles and CNS.

Effect of drug: Uterine stimulant, abortifacient

Part used: Seeds

MOA: Alkaloids (vasicine) act like oxytocin and acetylcholine on uterine muscle

Uses: Anthelmintic, abortifacient, emmenagogue, used in tribal medicine

Contraindications: High dose causes hallucination, neurotoxicity; avoid with antidepressants (MAOIs); not safe in pregnancy

100. Pergularia daemia

Marathi name – वेळवेल, उत्तरायण

Synonyms – Trellis-vine, Utranajutuka **Biological name** – Pergularia daemia

Family – Apocynaceae (formerly Asclepiadaceae)

Chemical constituents – Pregnane glycosides, flavonoids, saponins, steroids

Effect of drug – Antifertility, antipyretic, purgative, anti- inflammatory

Part used – Whole plant

Mechanism of action – Alters hormone levels, reduces inflammation, acts as a mild laxative

Uses – Fever, constipation, traditional contraception, ulcers

Contraindications – Pregnancy (may cause abortion), avoid long-term use

101. Phytolacca dodecandra leaf

Marathi name – पीळसा

Synonyms – African soapberry, Endod

Biological name – Phytolacca dodecandra

Family – Phytolaccaceae

Chemical constituents – Saponins, alkaloids, glycosides

Effect of drug – Spermicidal, molluscicidal

Part used – Leaves, berries

Mechanism of action – Disrupts cell membranes of parasites/sperm

Uses – Schistosomiasis control, natural contraception

Contraindications – Toxic in large doses, avoid internal use without guidance

102. Piper longum (Pippali)

Marathi name: पपळी

Synonyms: Long pepper

Biological name: Piper longum **Family:** Piperaceae

Chemical Constituents: Main active compound is piperine, along with piplartine and essential oils. Piperine enhances bioavailability and also has mild uterine stimulant effects at higher doses. It may act by modulating calcium channels.

Effect of drug: Mild uterine stimulant (in high dose)

Part used: Fruit

MOA: Enhances uterine contraction via calcium influx and neurostimulation

Uses: Bioavailability enhancer, respiratory conditions, digestive tonic

Contraindications: Avoid in pregnancy in high doses

103. Plumbago zeylanica (Chitraka)

Marathi name: चत्रक

Synonyms: White leadwort

Biological name: Plumbago zeylanica **Family:** Plumbaginaceae

Chemical Constituents: The root bark contains plumbagin, a naphthoquinone with strong pro-oxidant and uterine- stimulant properties. Other constituents include sitosterol and tannins. Plumbagin promotes prostaglandin synthesis and endometrial irritation.

Effect of drug: Strong uterine stimulant

Part used: Root bark

MOA: Increases prostaglandin synthesis and direct uterine muscle contraction

Uses: Abortifacient, appetite stimulant, digestive

Contraindications: Highly irritant; toxic in large dose; contraindicated in ulcers and pregnancy (unless intended abortion)

104. Podophyllum hexandrum root

Marathi name – वन पापड

Synonyms – Indian Mayapple, Himalayan Mayapple

Biological name – Podophyllum hexandrum

Family – Berberidaceae

Chemical constituents – Podophyllotoxin, berberine

Effect of drug – Anticancer, antiviral

Part used – Root

Mechanism of action – Blocks mitosis, interferes with DNA synthesis

Uses – Genital warts, cancer therapy

Contraindications – Pregnancy, toxic internally, avoid overuse

105. Podophyllum peltatum root

Marathi name – पापटवेल

Synonyms – Mayapple

Biological name – Podophyllum peltatum

Family – Berberidaceae

Chemical constituents – Podophyllotoxin, lignans

Effect of drug – Cytotoxic, antiviral

Part used – Root and rhizome

Mechanism of action – Inhibits cell division (mitosis)

Uses – Wart treatment, cancer research (precursor to etoposide)

Contraindications – Pregnancy, open wounds, internal use

106. Prangos Ferulacea

Synonyms –Laserpitium ferulaceum L., Cachrys alata Hoffm. , Cachrys goniocarpa Boiss., Cachrys prangoides Boiss., and Prangos alata

Biological name- Prangos ferulacea (L.) Lindl.

Family – Apiaceae (also known as Umbelliferae)

Chemical constituents – monoterpenes, phenolics, coumarins, flavonoids, alkaloids, terpenoids, saponins, tannins.

Plant Taxonomy Kingdom: Plantae (Plants)

Order: Apiales

Family: Apiaceae

Genus: Prangos

Species: Prangos ferulacea

Effect of drug – gastrointestinal disorders, Abortifacient, antioxidant

Part Used – leaves

Mechanism of action – Prangos ferulacea essential oil, and its components like β-ocimene and carvacrol, have been shown to reduce the amplitude of spontaneous and induced uterine contractions. This effect is thought to be mediated by inhibiting calcium influx through L-type calcium channels and calcium release from intracellular stores. The plant may also influence hormone levels associated with pregnancy, potentially disrupting the hormonal balance necessary for maintaining pregnancy

Uses- Cholinesterase-inhibiting, Uterine Relaxant, Antioxidant, Abortifacient.

Contraindications – contraindicated in pregnancy

107. Primrose

Marathi name –सांज चांदणी

Synonyms – Evening primrose

Biological name – Oenothera biennis

Family – Onagraceae

Chemical constituents – Gamma-linolenic acid (GLA), linoleic acid, vitamin E

Effect of drug – Hormonal balance, anti-inflammatory, antioxidant

Part used – Seeds (oil)

Mechanism of action – Modulates prostaglandin production, supports hormone metabolism

Uses – PMS, eczema, rheumatoid arthritis, menopausal symptoms

Contraindications – Pregnancy (especially seed oil), kidney disorders, high, Seizure disorders, blood clotting issues, pregnancy (caution)

108. Pterocarpus indicus

Marathi name: सोगद घड, बवळा (Bivala)

Synonyms: Narra, Burmese rosewood, Amboyna padauk, Lingoum echinatum (Pers.)

Biological name: Narra or Indian Padauk **Family:** Fabaceae

Chemical Constituents: Isoflavonoids like pterocarpin and homopterocarpin, flavonoids like quercetin and kaempferol, and other compounds such as pterocarpol, pterocarposide, and Vijayosin. Additionally, it contains terpenoids, steroids, and various other secondary metabolites like Campesterol, Cyclopropane, and Butylated hydroxytoluene. oils and fatty acids

Plant Taxonomy Kingdom: Plantae **Phylum:** Tracheophyta

Class: Magnoliopsida **Order:** Fabales

Family: Fabaceae (also known as Leguminosae) **Subfamily:** Faboideae

Genus: Pterocarpus **Species:** Pterocarpus indicus

Effect of drug: Diuretic, uterine stimulant(emmenagogue/abortifacient), antimicrobial, anti-inflammatory

Parts used: Bark, roots, leaves, heartwood

MOA: Isoflavones and stilbenoids likely stimulate mild uterine contractions and regulate menstrual flow; tannins contribute uterotonic effect.

Uses: Traditionally used to treat amenorrhea, heavy menstruation, menstrual pain, and as abortifacient; also, for diarrhea, fevers, skin ulcers, and infections

Contraindication: Pregnancy, possibly kidney impairment due to diuretic effect

109. Pudina (Mint)

Synonyms- Pudina, Spearmint, Menthi (telugu)

Biological Name- Mentha Piperita L. **Family-** Lamiaceae.

Chemical constituents- Menthol, menthone and menthyl acetate along with other compounds like limonene, β-caryophyllene.

Uses- Carminative, abortifacient, antioxidant, antipasmodic, antidiarrheal.

Mechanism of Action- Its main constituent menthol is believed to relax smooth muscles in the digestive system.

Contraindications- Pregnancy, breastfeeding, liver diseases, kidney disorders.

110. Rhynchosia rufescens

Marathi name: (रान तुर)

Synonyms: Wild Rhynchosia

Biological name: Rhynchosia rufescens **Family:** Fabaceae

Chemical Constituents: The plant contains isoflavones, anthraquinones, flavonoids, and sterols. Isoflavones may have weak estrogenic effects, which are suspected to influence uterine tissue.

Effect of drug: Uterine modulator (ethnomedicinal evidence)

Part used: Seeds

MOA: Possibly mimics estrogen or interferes with implantation

Uses: Used in traditional systems for fertility regulation

Contraindications: Lack of human safety data; avoid in pregnancy

111. Ruta graveolens herb

Marathi name – सतापा or सताफ or शताफा

Synonyms – Rue, Herb of Grace

Biological name – Ruta graveolens

Family – Rutaceae

Chemical constituents – Rutin, furanocoumarins, alkaloids Effect of drug – Antispasmodic, emmenagogue, sedative Part used – Aerial parts (leaves)

Mechanism of action – Relaxes muscles, stimulates menstruation

Uses – Menstrual cramps, anxiety, arthritis

Contraindications – Pregnancy, photosensitivity, toxic in high doses

112. Semecarpus anacardium Linn

Marathi name: भिलावा (Bhilawa)

Synonyms: Bhallataka, Bhela, Bhelatuki, and Balia,

Biological name: bhilawa **Family:** Anacardiaceae

Chemical Constituents: The nut and shell are rich in phenolic lipids such as anacardic acids, cardols, cardanols (e.g., 3-(8′,11′-pentadecadienyl) catechol), biflavonoids (biflavone A/C/A1/A2, tetrahydrorobustaflavone), semicarpuflavan, gulluflavone, semecarpol, Bhilawanol, and common fatty acids (oleic, linoleic, palmitic, stearic, arachidic acids)

Plant Taxonomy Kingdom: Plantae **Subkingdom:** Tracheobionta **Super division**: Spermatophyta **Division:** Magnoliophyta

Class: Magnoliopsida **Subclass:** Rosidae **Order:** Sapindales **Family:** Anacardiaceae **Genus:** Semecarpus **Species:** Anacardium

Effect of drug: Emmenagogue, uterine stimulant, spermicidal, cytotoxic (anticancer), anti-inflammatory, analgesic, antioxidant

Parts used: Nut/kernel, pericarp (fruit shell), oil

MOA: Phenolic lipids and biflavonoids induce apoptosis in uterine and cancer cells, inhibit COX-1/2, modulate sperm viability; strong uterine and emmenagogue activity reported.

Uses: Traditional Ayurvedic use as emmenagogue, purgative, anticancer, anti-arthritic, aphrodisiac (while spermicidal in males) hepatoprotective, anthelmintic

Contraindication: Pregnancy, lactation; potent components may cause toxicity—avoid without supervision

113. Sesamum indicum L.

Marathi Name: तीळ (tila)

Synonyms: Sesame, gingelly benne & benniseed

Biological Name: sesamum indicum L.

Family: Pedaliaceae

Chemical constituents: lignans (sesamin, sesamolin), flavonoids, phenolic acids, phytosterols, tocopherols & phospholipids.

Effect of drug: emmenagogue

Part used: Seed

MOA: Sesame had a significant effect on the removal of RPOC & the Reduction of pain & vaginal bleeding.

Uses: 1) can help lower blood pressure 2) reduce joint pain & inflammation 3) Antioxidant
Contraindication: People with known sesame allergies should avoid them

114. Smithia conferta J.E.

Marathi Name: मकई (Makai)

Synonyms: Smithia sensitiva var. conferta, lajalu

Biological name: Smithia conferta J. E.sm

Family: Fabaceae

Chemical constituents: Saponins Can cause uterine stimulation

Effect of drug: Diuretic & antioxidant

Part used: leaves & stem

MOA: uterine contraction

Uses: 1) It is traditionally used in folk medicine mainly for skin disease, wounds, anti-inflammatory & diuretics

Contraindication: It generally advised to avoid high doses during pregnancy

115. Solanum torvum (Bhui Ringani)

Marathi name: भई रगणी

Synonyms: Turkey berry

Biological name: Solanum torvum

Family: Solanaceae

Chemical Constituents: Rich in steroidal alkaloids such as solasodine, torvoside, and flavonoids. Solasodine has known progesterone-modulating activity and is used as a precursor in steroid synthesis.

Effect of drug: Mild uterine stimulant

Part used: Fruits MOA: Acts as partial progesterone antagonist; stimulates uterine tone

Uses: Hematinic, antihypertensive, used in anemia

Contraindications: Avoid high doses during pregnancy

116. Spine gourd (Momordica angustisepala)

Marathi Name: Kantoli,Kartoli

Synonyms: Teasle gourd,spine gourdbristly balsam pear

Botanical Name: Momordica angustisepala

Family: Cucurbitaceae

Chemical Constituents: terpenoids, saponins, phenolics, and sterols. Specifically, studies have identified compounds like n- Hexadecanoic acid, 9-octadecenoic acid methyl ester, Cholesterol, Cholestanol, and Stigmasterol in root extracts. Additionally, the presence of (E)-Anethole, Safrole, Methyl eugenol, and Germacrene D has been reported.

Parts used: roots, leaves

Effect of drug: uterine contraction, smooth muscle relaxation

MOA: oxytocics (which stimulate uterine contractions) and ergot alkaloids (which also affect smooth muscle contractions). Hormonal involvement may also play a role in the abortifacient effect.

Uses: induces abortion, malaria, digestive disorders, fever

Contraindications: anemia, disturb blood sugar level, stomach rash

117. Stachys lavandulifolia

Synonyms: sideritis calycantha, stachys boissieri, stachys zuvandica

Biological name: Stachys lavandulifolia

Family: lamiaceae

Chemical constituents: It contains hydroxyl & phenolic compounds Such as polyphenols, tannins, Steroids, flavonoids & terpenoids.

effect of drug: reduce the progesterone level

Part used: aerial parts, specifically the flowering aerial parts

MOA: Due to the presence of flavonoid compounds, it changes the function level of the hypothalamic-pituitary- gonadal axis. The plant can reduce the progesterone level by more than 20% therefore, it leads to miscarriage & inability to preserve the fetus & risk of abortion.

Uses: 1) It is used to control premenstrual syndrome (PMS) 2) It is used to control primarily dysmenorrhea symptoms.

Contraindication: Avoid during pregnancy

118. Stephania Japonica

Marathi name: पहाड-वेल(Mothi Pahadvel) or थोरली पहाड-वेल (Thorli Padaval)

Synonyms: Stephania hernandifolia, Menispermum japonicum Thunb

Biological name: Malabuta

Family: Menispermaceae

Chemical Constituents: The plant produces a range of alkaloids—particularly bis-benzylisoquinoline types like stephasubine, dihydro-stephasubine, fangchinoline, d-tetrandrine, hernandifoline, magnoflorine, aknadinine, aknadine, aknadicine—and unique morphinane alkaloids. Additionally, it contains saponins, steroids, fats, tannins, glycosides, and flavonoids.

Plant Taxonomy Kingdom: Plantae

Clade: Tracheophytes Clade:

Angiosperms Clade: Eudicots

Order: Ranunculales

Family: Menispermaceae

Genus: Stephania

Species: Stephania japonica (Thunb.) Miers

Effect of drug: Antibacterial, antifungal, anti-inflammatory, antioxidant antidiarrheal, uterine implantation inhibitor (post-coital)

Parts used: Leaves, stem, roots, tubers

MOA: Aqueous extracts can alter reproductive hormones (↑ estradiol, LH, FSH; ↓ progesterone), causing anti-implantation and uterotrophic effects in animal studies. Alkaloids and saponins likely contribute to reproductive and anti-inflammatory actions

Uses: Used traditionally for fever, dysentery, gastritis; as anti-implantation agent post-coitum in rats; antimicrobial

Contraindication: Should not be used in pregnancy

119. Tanacetum vulgare herb

Marathi name – तणतण (commonly known as Tansy)

Synonyms – Tansy

Biological name – Tanacetum vulgare

Family – Asteraceae

Chemical constituents – Thujone, camphor, flavonoids, tannins

Effect of drug – Anthelmintic, emmenagogue, insect repellent

Part used – Aerial parts

Mechanism of action – Stimulates uterine muscles and nervous system

Uses – Worm infestations, menstrual disorders, insect bites

Contraindications – Pregnancy, liver disease, toxic in high doses

120. Tara mira

Synonyms- Tarimira, Arugula, Rocket, Rucoli, Colewort, Lahi, Tori, Tuvari

Biological Name- Eruca sativa linn.

Family- Cruciferae

Plant part used- Wood, leaves, seeds.

Chemical constituents- Contains flavonoids, phenolic acid, terpenes, carotenoids, tannins, glycosides, saponins, sterol.

Uses- As abortifacient, antibacterial, antidiabetic, antioxidant, antiplatelet.

Mechanism of Action- It can improve sperm quality, reduce oxidative stress in testes and potentially enhance fertility.

Contraindications- In pregnancy and allergy.

121. Taxus wallichiana zucc

Marathi name: तालीसपत्र

Synonyms: Himalayan yew, Birmi, Thuner

Biological name: Taxus wallichiana zucc. **Family:** Taxaceae

Chemical constituents: Taxanes (eg. paclitaxel), Taxine alkaloids (affects smooth muscle)

Effect of drug: emmenagogues abortifacients.

Part used: leaves & bark

MOA: Taxine alkaloids block calcium & sodium channels in muscle tissue which affects cardiac & smooth muscle & In theory, this could stimulate uterine muscle. (Leading to abortion)

Uses: 1) Emmenagogue in folk medicine 2) Respiratory conditions 3) Antispasmodic

Contraindication: 1) strictly contraindicated during pregnancy 2) Heart disease - Highly toxic

122. Tephrosia purpurea linn

Marathi name: Sarphoka (सपखा)

Synonyms: wild indigo, Sharpunkha, sarapunkha.

Biological name: Tephrosia purpurea linn

Family: fabaceae.

Chemical constituents: Flavonoids (Rutin, Quercetin, Tephrosin), alkaloids, saponins.

Effect of drug: uterine stimulant

Part used: whole plant

MOA: Its saponins & flavonoids are more directed toward liver, spleen & skin health rather than uterine action.

Uses: 1) Traditionally used for spleen enlargement 2) Mild emmenagogue

Contraindication: 1) Avoid high doses during pregnancy

123. Thevetia peruviana

Marathi name: दपवळा कण्हेर

Synonyms: Yellow oleander, lucky nut, Thevetia neriifolia

Biological name: Thevetia preuvione

Family: Apocynaceae

Chemical constituents: Cardiac glycosides, Nerifolin, Thevertoxin, flavonoids saponins

Effect of drug: abortifacient.

Part used: Seeds & leaves

MOA: Thevetia seeds to induce abortion by causing violent poisoning to uterine contraction & fetal expulsion

Uses: 1) Historically used in folk practices to cause abortion

Contraindication: 1) Absolutely contraindicated in pregnancy

2) Heart patients-extremely dangerous

124. Trachyspermum ammi (Yavani)

Marathi name: ओवा

Synonyms: Ajwain, Bishop's weed

Biological name: Trachyspermum ammi

Family: Apiaceae

Chemical Constituents: Contains thymol (main active), γ- terpinene, p-cymene, and other volatile oils. Thymol is a known smooth muscle stimulant and antimicrobial agent, often responsible for its uterotonic and carminative actions.

Effect of drug: Uterine stimulant in large doses

Part used: Seeds

MOA: Thymol increases intracellular calcium in smooth muscle, enhancing uterine contractions

Uses: Carminative, digestive, used in postpartum tonics

Contraindications: Large doses may cause uterine spasms; avoid during pregnancy unless under supervision

125. Trichosanthes dioica

Marathi Name: Kadu-padvala (कडपडवळ),Parwal(परवळ)

Synonyms: Pointed gourd, parwal

Biological Name: Trichosanthes dioica

Family: Cucurbitaceae

Chemical Constituents: trichosanthin, cucurbitacin- type triterpenes, sterols (including 24-methylcholesterol, euphol, tirucallol, cycloartanol, taraxerol, α-amyrin, among others), fixed oils, starch, trace tannins, flavonoids, alkaloids, reducing sugars, saponins, and steroids.

Plant Taxonomy Kingdom: Plantae

Division: Magnoliophyta **Class:** Magnoliopsida **Order:** Cucurbitales

Family: Cucurbitaceae **Genus:** Trichosanthes **Species:** dioica

Effect of drug: Abortifacient, hydragogue, cathartic, purgative, antiseptic, anticonvulsant

Parts used: Root tuber (bulbous part), seeds

Mechanism of Action (MOA): Trichosanthin selectively damages syncytiotrophoblast cells in the placenta causing necrosis → reduced progesterone/HCG → prostaglandin- induced uterine contractions → abortion.

Uses: Mid-gestation abortion; treating ectopic pregnancy, hydatidiform mole, invasive mole, choriocarcinoma.

Contraindication: unsuitable in early gestation without medical oversight due to strong placental effects.

126. Trillium grandiflorum

Marathi name: पांढरे ट्रिलियम **Synonyms:** white trillium, wake-robin, Birthroot

Biological name: Trillium grandiflorum (Michx.) Salisb

Family: Melanthiaceae

Chemical constituents: Steroidal Saponins (eg, diosgenin derivatives), Flavonoids.

Effect of drug: emmenagogue

Part used: Rhizomes & Roots.

MOA: Steroidal saponins could mildly stimulate uterine contractions.

Uses: 1) It is traditionally used to help childbirth or regulate menstruation. 2) Astringent.

Contraindication: 1) children should avoid it. 2) Avoid during pregnancy

127. Urginea indica

Marathi name – रानकांदा, वनपलांडू **Synonyms –** Indian squill, Sea onion

Biological name – Urginea indica

Family – Asparagaceae (formerly Liliaceae)

Chemical constituents – Scillaren A & B, cardiac glycosides, flavonoids

Effect of drug – Cardiotonic, diuretic

Part used – Bulb

Mechanism of action – Enhances cardiac muscle contraction and urine output

Uses – Congestive heart failure (traditional), edema, expectorant

Contraindications – heart diseases without supervision, pregnancy, overdose can be toxic

128. Vernonia cinerea

Marathi name – सहिवी

Synonyms – Purple fleabane, Little ironweed

Biological name – Vernonia cinerea

Family – Asteraceae

Chemical constituents – Flavonoids, alkaloids, terpenoids, tannins

Effect of drug – Anti-inflammatory, antipyretic, anti-smoking aid

Part used – Whole plant

Mechanism of action – Reduces inflammation and fever; some compounds act on nicotine receptors

Uses – Fever, piles, respiratory issues, smoking cessation support

Contraindications – None specific, but avoid excess dosage

129. Vidanga (Embelia ribes)

Marathi Name: दवडिंग

Synonyms: Krimighna, chitratandula, amogha, krimighna, jantunashna, tandula, vellama, chitratandula

Biological Name: Embelia ribes Burm.f

Family: Myrsinaceae

Chemical Constituents: The dried berries of Embelia ribes contain embelin, a potent bioactive benzoquinone, along with other phenolic compounds, volatile oils, and tannins. Embelin has demonstrated anthelmintic, antioxidant, anti-inflammatory, antimicrobial, and antifertility effects. Its antifertility and uterotonic actions are attributed to embelin's ability to influence hormonal balance and myometrial (uterine muscle) activity.

Plant Taxonomy Kingdom: Plantae

Phylum: Tracheophyta **Class:** Magnoliopsida **Order:** Ericales

Family: Myrsinaceae (or Primulaceae)

Genus: Embelia **Species:** Embelia ribes Burm. f.

Effect of Drug: Anthelmintic, antifertility, emmenagogue, abortifacient, digestive aid.

Parts Used: Dried berries (seeds).

MOA: Embelin likely interferes with embryo implantations and stimulates uterine contractions; hormonal modulation and local uterotonic effects are implicated.

Uses: Traditionally used for deworming, indigestion, cough, throat infections, obesity management, skin disorders, and as an agent to stimulate menstruation or terminate pregnancy.

Contraindication: caution in individuals with hormonal disorders or GI sensitivity; potential hepatotoxicity in high doses or prolonged use.

130. Viscum articulatum Burm

Marathi name: बंदा

Synonyms: Mistletoe, loranth.

Biological name: visum articula-tum Burm

Family: loranthaceae

Chemical constituents: lectins & Visiotoxins can have cytotoxic activity & in some folk's systems, mistletoes were thought to cause uterine contraction or menstrual flow stimulation.

Effect of drug: mild uterine stimulant effect Part used: whole plant mostly leaf

MOA: promote menstrual Flow

Uses: 1) treat fever 2) Immune modulation. 3) Used for menstrual disorders.

Contraindication: 1) Avoid during pregnancy 2) Breastfeeding

131. Vitex negundo Linn

Marathi name: निर्गुडी

Synonyms: five-leaved chaste tree, sindhuar

Biological name: Vitex negundo Linn

Family: Verbenaceae

Chemical constituents: flavonoids (eg. casticin, orientin), Iridoid glycosides (agnuside), alkaloids.

Effect of drug: menstrual (emmenagogue) regulator

Part used: leaves & seeds

MOA: regulating menstruation

Uses: 1) Regulate menstrual flow. 2) Respiratory infections treatment 3) fever

Contraindication: 1) Avoid high doges because 2) Hormonal modulation might theoretically affect pregione 3) Avoid from children

132. Zataria multiflora boiss

Synonyms: Shirazi, zataria bracteata boiss

Biological Name: Zataria multiflora

Family: Lamiaceae

Chemical constituents: It include B-Sitosterol, luteolin, terpinen Linalool, 6-hydroxyluteolin, thymel, carvacrol, Y- terpinene & p-cymene

Effect of drug: abortifacient

Part used: leaves

MOA: It is enriched by gamma- terpinene that may damage DNA However, thyme consumption in early pregnancy may lead to abortion due to its adverse effects on the placental diameter.

Uses: 1) It is used as a seasoned flour in many foods.

Contraindication: 1) contraindicated during pregnancy

133. Ziziphus nummularia Burm

Marathi name: Bor (बोर)

Synonyms: Ziziphus rotundifolia lam., ziziphus jujuba var. nummularia, Jharbee

Biological name: Ziziphus nummularia Burm.

Family: Rhamnaceae

Chemical constituents: Cyclopeptide alkaloids (eg. nummularine-A, nummularine -B), Saponins have sometimes been used to stimulate uterine contractions.

Effect of drug: sedative, less abortifacient

Part used: leaves or roots

MOA: Uterine stimulation

Uses: 1) It was used to regulate menstruation 2) Analgesic

Contraindication: 1) avoid during pregnancy 2) avoid known allergic person

Conclusion: In conclusion, while synthetic medications such as mifepristone and misoprostol remain important medical tools, their harmful side effects, accessibility issues, and potential for misuse underscore the need for alternative approaches. Herbal abortifacients, when properly validated and regulated, offer a promising path forward—combining traditional knowledge with modern scientific methods to promote safe, affordable, and culturally sensitive reproductive care. Future efforts must focus on ethnopharmacological research, community education, and policy integration to ensure that women across all socio- economic strata can make informed, safe choices regarding their reproductive health.

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