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MEDICINAL PLANTS AS A SOURCE OF ALTERNATIVE MEDICINE IN BIRTH CONTROL: A REVIEW

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ABSTRACT

This review provides a comprehensive summary of medicinal plants as alternative medicine reported from year 2000 to 2013 to be used throughout the world to induce abortion for the purpose of saving mother life, for avoiding birth of child with health ailments and for population control. Traditional medicines are practiced worldwide for regulating fertility since ancient times. Still the tribal population mainly depends upon these plants for the sake of family planning and to induce abortion. Even though there is a rapid development in allopathic medicine, the faith has not been degraded towards herbal due to its side effects. This review may help the researchers to deal with the further pharmacological investigation of these medicinal plants.

KEYWORDS: Abortifacient, Allopathic medicine, Ethnobotany, Family planning, Population Control.

INTRODUCTION

An abortifacient is a substance that induces abortion. Traditionally the tribal women prefer plant medicines rather than modern medicines for menstrual trouble, conception disorders, birth control practices, sterility, abortion etc. Abortifacients are drugs or agents that cause abortion i.e. expulsion of fetus permanently, particularly at any time before it is variable or capable of sustaining life (Jain, S.K., 1964). Common abortifacients used in performing medical abortions include mifepristone, which is typically used in conjunction with misoprostol in a two-step approach (Pradhan, D.K., 2012). Plants, which are the source of a large proportion of medicines, have been used for the treatment of several human ailments for

thousands of years.(Farnsworth, N.R.,1975). The importance of plants as a source of antifertility drugs has been emphasized by many researchers (Farnsworth, N.R., 1975; Yakubu, M.T.,2010). Antifertility agents obtained from indigenous medicinal plants would be of immense benefit especially to inhabitants of developing countries, since the cost of these drugs would be within their means (Goonasekera, M.M.,1995). The antifertility plants with estrogenic property can directly influence pituitary action through peripheral modulation of luteinizing hormones (LH) and follicle-stimulating hormones (FSH) by decreasing the secretion of these hormones and blocking ovulation (Brinker, F.,1997). In addition, the plant may also intercept the synchronized development of the ovum and endometrium while others may have abortifacient or antiprogestational effects (Gark, S.K., 1978; Prakaash, A.D.,1985). In different parts of the world, herbal substances have been used to restrict human population by exploring their abortifacient properties and their use often leads to vigorous systemic illness or even death (Maitre, C.S., 2000; Keshri, G., 2003). One of the most challenging pursuits in the realm of pharmaceutical and medical sciences is the search for newer and more potent drugs with little toxic effects, self-administrable, less expensive and completely reversible. Much of these properties are observed in the drugs of plant origin. During the latter part of this century, the practice of herbalism has become main stream throughout the world. This is due in part to the recognition of the value of traditional medical systems, particularly of Asian origin, and the identification of medicinal plants from indigenous pharmacopeias. In the Western world, in particular, the developing concept that 'natural' is better than 'chemical' or 'synthetic' has led to the evolution of Neo-Western herbalism. In the US, often guised as food or food supplements, known as nutraceuticals, these formulations are readily available for those that wish to self-medicate (Lewis, M.E., 2001; Unny, R., 2003). There is vast availability of such plants which are used traditionally for population control and ethnobotanists are keeping keen interest in finding out the locally used medicinal plants in different regions of world. Under this investigation one data reveals 577 plant species belonging to 122 families, traditionally used in fertility regulation in females, have been recorded, of which 298 plants have been mentioned as abortifacients (42%), 188 as contraceptives (31%), 149 as emmenagogues (24%), and 17 as sterilizers(Kumar, D., 2011)

Over 7500 species of plants are estimated to be used by the ethnic communities of human and veterinary healthcare in India. It was officially recognized that 21,000 plants have medicinal value while over 6,000 plant species are estimated to be explored in traditional, folk and herbal medicines. It is necessary that we should have full knowledge regarding the

occurrence, frequency distribution, phenology and other aspects for their proper utilization. Traditionally the tribal women prefer plant medicines rather than modern medicines for menstrual trouble, conception disorders, birth control practices, sterility, abortion etc. Among the three ways of controlling population i.e. Abortion, Sterilization or Contraception, abortion is the most commonly used method by tribal womens. (Ajesh, T.P; 2012). Abortifacients are generally used to save mothers life, to prevent birth of defective child**,** for population control in developing countries. But maximum uses of these synthetic abortifacient have been reported in developed countries to prevent pregnancy and as a result had shown significant complications in Childs whose mothers are in regular intake of such chemicals. The side effects of synthetic abortifacients is down syndrome, Trisomy 18, Muscular dystrophy and anencephaly etc in child taking birth from the mother taking pills from longer period. Commonly reported abortifacient used in market to accomplish discussed facts are *Mifeprestone and Misoprostol*.

Mifepristone - antiprogesterone, binds to the progesterone receptor to block the receptor, thus inhibiting progesterone from binding. It does not activate a true biologic response to progesterone; it does, however, have both weak antiglucocorticoid and antiandrogenic activity. Mifepristone also softens and dilates the cervix, causes decidual necrosis (which leads to placental detachment), increases uterine lining prostaglandin release, increases uterine contractions and enhances uterine sensitivity to administered prostaglandin.

Misoprostol - prostaglandin, binds to myometrial cells to cause strong myometrial contractions leading to expulsion of tissue. This agent also causes cervical ripening with softening and dilation of the cervix. There are many other medicines that can interact with Methotrexate. Methotrexate can cause birth defects and miscarriages, so women taking the drug must use a reliable method of birth control. Due to usage of these drugs the bleeding will be very heavy, cramping can be severe, two visits to the provider are necessary. Side effects include bleeding and cramping as the uterus contracts and push the pregnancy out of the body. The bleeding can be heavy at times, as well as the cramping. Some women experience nausea, vomiting and headaches. It is different for everyone. Severe side effects are rare, but the possibility of losing too much blood can happen, even though there are several difficulties in these techniques.

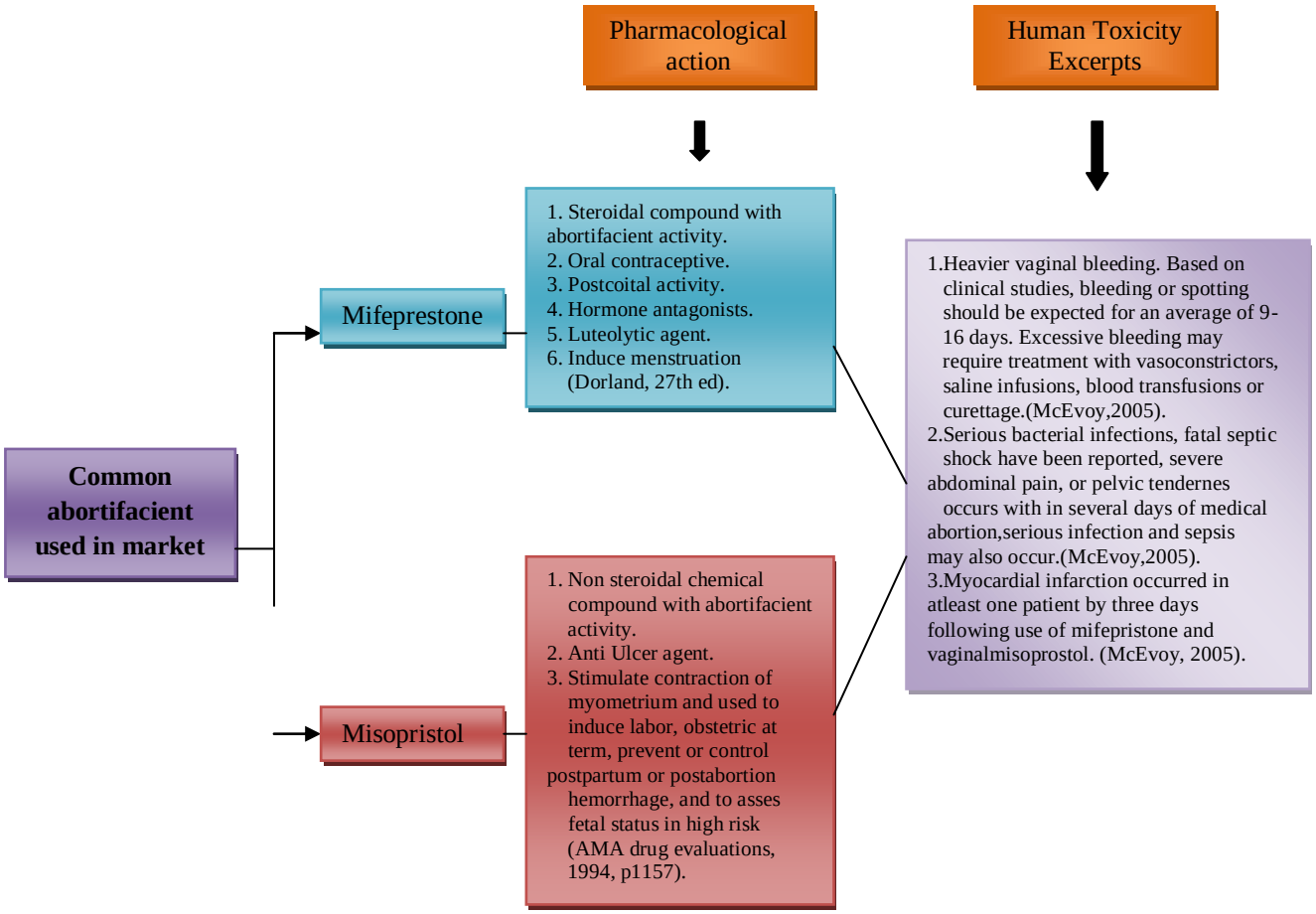

Fig 1: Pharmacological facts of common abortifacient used in market.

Alternative Medicine

The term ‘complementary and alternative medicine’ (CAM) is defined by the National Center for Complementary and Alternative Medicine (NCCAM) as ‘a group of diverse medical and health systems, practices, and products that are not presently considered part of conventional medicine’ (2009). Although there are literally hundreds of therapies that can be included within the broad definition of CAM, only about 15–20 have adequate evidence of safety and efficacy to gain credibility (Tiran, 2001). NCCAM categorizes CAM into five major domains: (1) whole medical systems; (2) mind–body medicine; (3) biologically based; (4) manipulative and body-based practices; and (5) energy fields (National Center for Complementary and Alternative Medicine, 2009). Alternative medicine includes therapeutic or health care practices which are of natural origin such as homeopathy, naturopathy and herbal medicine and considered safe and effective in comparision to allopathic system of medicine, which can be a better substitute in medicine field if focused studies will be made on ethnobotanical investigation and their further descriptive research to report a accurate effect of natural drugs and their products consumed by people. This will enlighten the

effectiveness of natural drug as well as will educate the people from unknowingly consuming such herbs which may be harmful to them.

According to the World Health Organization (WHO) about 65-80% of the world's population in developing countries depends essentially on plants for their primary health care due to poverty and lack of access to modern medicine (Sharma, K.A.,2010). In recent years, use of ethnobotanical information in medicinal plant research has gained considerable attention in segments of the scientific community (Heinrich, M.,2000). The use of medicinal plants and their products for regulation of fertility in India and other countries is still continuing (Kaur, R.,2011). Until recently, plants were important sources for the discovery of novel pharmacologically active compounds, with many blockbuster drugs being derived directly or indirectly from plants (Newman, D.J., 2007; Li P,2010). However, the benefits of modern drugs are felt primarily in developed countries, leaving almost 75% of the world population without access to the modern health care products. Thus developing countries continue to rely on ethnobotanical remedies as their primary medicines (Owoabi, J.,2007).Traditional medicine played a crucial role in combating multiple and complex conditions affecting Africans. Because of its popularity, accessibility and affordability, more than 80% of the people in the region continued to rely on it for their health care needs (WHO,2003). Introduction of modern medicine alone does not adequately provide for the comprehensive or integral health care needs of developing countries. Consequently in many communities the practice of simultaneous use of traditional and western medicine continues. Indeed it is always been difficult to reach poor people with development aid, particularly in health care where most resources benefit the middle classes in urban hospitals. Thus traditional medicine is often the only affordable and accessible form of health care (Thirumalai, T.,2010). Thus instead of relying on trial and error, as in random screening procedures, traditional knowledge helps scientist to target plants that may be medicinally useful.

This review consist the list of medicinal plants reported by different researchers having abortifacient ability and could of interest of scientist dealing with pharmacological investigation of such plants that are still not biologically tested for their contraceptive efficacy. The list given below deals with the plants which are being in use by the tribal communities of West Bengal; India (Mitra, S.,2009), Nigeria (Yakubu, M.T.,2009), Kerala; India (Ajesh, T.P.,2012), Jharkhand; India (Kumar, D.,2011) etc. Different plant parts are responsible in different plants for abortifacient activity in below given list leaves of 12 plants,

seed of 6 plants, bark of 8 plants, fruit of 5 plants, whole plant part of 5 plants, Root of 5 plants, fresh root of 4 plants, stem of 2 plants, Tuber of 2 plants, Aerial part, pulp of ripe fruit, fresh plant, peal of fruit of 1 plant have been reported, Conover, 2003; in his paper discussed nine plants which are reported for their abortifacient activity, but not mentioned which plant part has been used to induce this activity. The mode of use of some plants by folk lore's is also mentioned in few of the reviewed papers.

Mitra and Mukherjee, 2009; have reported following abortifacient preparations used by the tribal people of west Bengal:

1 ***Annona reticulata* Linn.** (Annonaceae) CN: Bullocks heart (E); VN: *Nona* (B); *Nag-hawa* or *Ramphal* (S). The seed powder (about 3g) mixed with the powder of black pepper seeds in equal amount is given to the pregnant women by the *Santal* tribe. It is said that the drug is effective for 3-4 months pregnancy only.

2 ***Abrus precatorius* Linn.** (Fabaceae) CN: Indian liquorice (E). VN: *Kunch* (B/O) *Oraon* tribe use *fresh seed powder (about 20g) mixed with a glass of lukewarm water at early morning in empty stomach to induce abortion.

3 ***Achyranthus aspera* Linn.** (Amaranthaceae) CN: Prickly chaff flower (E). VN: *Apang* (B); *Rechari* (Lo); *Sitir-kad* (S); Fresh root (3-5 pieces, about 1cm long) is made into paste. The paste thus obtained is mixed with lukewarm water to stop bleeding after abortion by the *Lodha* tribe. It is given after every 3 h. *Fresh root (about 9 cm long) is used to induce abortion by the *Santals*.

4 ***Aerva lanata* (Linn.) Juss. ex Schult.** (Amaranthaceae) VN: *Chaya* (B); *Tore-ara* (Lo). Fresh root (about 9cm long) is used as a stick for inducing abortion by the *Lodha*. The medicine man suggested that this processes of abortion is effective for terminating pregnancy up to 4 months only.

5 ***Alternanthera philoxeroides* (Mart.) Griseb.** (Amaranthaceae) CN: Alligator weed (E). VN: *Jal- sachi-ara* (Lo). A piece of fresh plant, about 9cm long is used as stick to induce abortion by the *Lodha* tribe. *Lodha* women take ½ "bhari" *Hing* (***Ferula assafoetida* Linn.**), at the top of this stick and keep the whole things over night inside to induce abortion.

6 ***Ananas comosus* (Linn.) Merr.** (Bromeliaceae) CN: Pineapple (E); VN: Anaras (B/P). Fresh young leaves (about 10g) are made into paste with 7 black pepper (***Piper nigrum* Linn.**) seeds and the whole paste is given to the pregnant women to induce abortion by the *Polia* tribe.

7 ***Aristolochia indica* Linn.** (Aristolochiaceae) CN: Indian Birthwort (E). VN: *Iswar mul* (B); *Isen mul* (Sa); *Isher mul* (Lo) The fresh root (about 9 cm long) is used to induce abortion by the *Lodha* women. The *Sabars* also use the paste of the roots prepared by crushing fresh root (about 10g) with *Hing* in equal amount as abortificiant.

8 ***Avicennia marina* (Forssk.) Vierch.** (Avicenniaceae) VN: *Peyara ban* (B). *Munda* tribe mix the leaf extract with a glass of lukewarm goat milk and adequate amount of sugar and give this preparation at bed time to release the fetus.

9. ***Barleria cristata* Linn.** (Acanthaceae) VN: *Jhinti* (B); *Bantishi* (S). Fresh root of about 3g is crushed with about 100ml *pochai* (alcohol from rice) or *Mahua* (alcohol from the flowers of ***Bassia latifolia* Roxb.**) and give it once a day in early morning for 3-5 consecutive days to induce abortion up to the stage of 3 months pregnancy by the S*antal*.
10. ***Bombax ceiba* Linn.** (Bombacaceae) CN: Silk cotton tree (E). VN: *Shimul* (B); *Semal* (O) Seed powder about 30g is made in to paste with sugar molasses (about 50g) and *Hing* (about 10g). The whole paste thus obtained is divided into 3 equal parts. One each of these 3 parts is given in 12h gap to induce abortion by the *Oraon* tribe.
11. ***Caesalpinia pulcherrima* (Linn.) Swartz** (Caesalpiniaceae) CN: Barbadose pride (E). VN: *Krishna Chura* (B); *Jiti* (Lor). Dried leaf infusion about 1 cupful is given in early morning in empty stomach to induce abortion by the *Lohar* tribe. It is said that single dose is highly effective abortifaciant to induce abortion of up to 2 months pregnancy. If the first dose is failed then a second dose is given after 7 days of the 1st dose.
12. ***Cuscuta reflexa* Roxb.** (Cuscutaceae) VN: *Swarnalata* (B); *Amarbel* (S). Fresh plant extract of about 50g is mixed with the extract of *Bishkutuli* (***Polygonum hydropiper* Linn.**), seeds of the same amount, 5 black pepper seeds and about 5g table salt. The whole mixture is boiled after adding 200ml water. The whole mixture after boiling is filtered and the *Santals* women take the filtrate in early morning, empty stomach for3 successive days to induce abortion.
13. ***Meyna spinosa* Roxb. ex Link**(Rubiaceae) VN: *Meyna* (B/P) Pulp of the ripe fruits and seeds are made into paste with 2-3 *Rasun* (bulb of *Allium sativum* Linn.) and *Hing* (about 2.5g). The whole paste thus obtained is made into a pill to keep it inside for overnight to induce abortion by the *Polia* tribe. It is said that this drug is effective to induce abortion up to 2 months pregnancy.
14. ***Dendrophthoe falcata* (Linn. f.) Ettingshausen** (Loranthaceae) VN: *Baramanda* (B); *Banda* (M) Fresh stem of about 20g, along with11 black pepper seeds of about 10g and *Cheeta* root (*Plumbago indica* Linn.) are crushed to paste. The whole paste thus obtained is given early

morning, empty stomach by the *Munda* to induce abortion.

15. ***Plumbago rosea* Linn.** (Plumbaginaceae) VN: *Lal-cheeta* (B/S) A candle of about 9cm long is prepared from the root paste of this plant, which is kept inside overnight to induce abortion for the pregnancy up to 3 months by the *Santal*.
16. ***Gloriosa superba* Linn.** (Liliaceae) CN: Malabar-glory lily (E). VN: *Ulat chandal* (B); *Samansom* (O). Fresh roots of about 20g are made in to paste along with 7 black pepper seeds. The whole paste thus obtained is given with a glass of lukewarm goat milk at the bed time to induce abortion by the *Oraon* tribe.
17. ***Plumbago zeylanica* Linn.** (Plumbaginaceae) VN: *Chita* (B/O) Fresh root of about 9cm long is used to induce abortion by the *Oraon* tribe. *Semecarpus anacardium* Linn**. f.** (Anacardiaceae) VN: *Bhela* (B/R). The fresh root bark of about 20g is made into paste. Two small pills are prepared from this paste and are kept inside overnight to induce abortion by the *Rajbanshi* tribe.
18. ***Hibiscus rosa-sinensis* Linn.** (Malvaceae) CN: China-rose (E). VN: *Jaba* (B/Sa) Inner portion of the root bark (about100g) is made into paste along with the seeds of black pepper. The whole paste thus obtained is mixed with a glass of water and is given as the abortifaciant to *Sabar* women.
19. ***Stephania japonica* (Thumb.) Miers.** (Menispermaceae) VN: *Ahnad-ne-muka* (B); *Agna-lata* (M). Fresh root paste of about 30g is given to induce abortion for the pregnancy up to 2 months by the *Munda* tribe.
20. ***Thevetia peruviana* (Pers.) K. Schum.** (Apocynaceae) VN: *Kalke* (B/R) Seeds are made into paste with adequate amount of sugar molasses and the paste is given at bed time to induce abortion by the *Rajbanshi*. Care should be taken during the application of this drug, since it is used at the late stage of the pregnancy; in case of overdose it causes profuse bleeding.
21. ***Uraria lagopodioides* Desv.** (Fabaceae) VN: *Sankarjata* or *Chakulia* (B); *Chintamoni* (O) Whole plant paste of about 30g is made into a candle which is kept inside to induce abortion by the *Oraon* tribe.

Ajesh et al; 20012. has reported following abortiacients preparations used by Mannan Tribes of Idukki:

1. ***Acacia catechu* (L.f.) Willd.** (Fabaceae) VN: Karingali. 3-5 ml. of bark juice is taken orally for the first three months.

2. ***Ananas comosus* (L.) Merr.** (Bromeliaceae) VN:Kannara. Ripened fruit is used to induce abortion
3. ***Annona reticulata* L.** (Annonaceae) VN: Seetha Pazham/ Atha. Seed paste is given orally on empty stomach for 3-5 days
4. ***Caesalpinia pulcherrima* (L.) Sw.** (Fabaceae) VN: Rajamally. Bark juice (2 ml) is administrated orally on empty stomach for the first three months
5. ***Carica papaya* L.** (Caricaceae) VN: Kappalam. 10-15 ml of latex of raw fruit is given orally once a day for 3 days
6. ***Curculigo orchioides* Gaertn.** (Hypoxidaceae) VN: Nilappana. Past of the tuber is given orally in empty stomach
7. ***Dolichos trilobus* L.** (Fabaceae) VN: Kattumuthira. Whole plant juice is used to induce abortion in the first three months
8. ***Gloriosa superba* L.** (Liliaceae) VN: Menthonni. Root extract is given orally for twice a day for 3days
9. ***Momordica charantia* L.**(Cucurbitaceae) VN: Pavakka. Fruit juice is given orally twice a day for 5 days on the first three month
10. ***Plumbago zeylanica* L.** (Plumbaginaceae) VN: Koduveli. 3-5 ml. of root paste is taken orally to induce abortion
11. ***Rhynchosia rufescens* (Willd.) DC.** (Fabaceae) VN: Ramachempu. Leaf decoction is administered for abortion for the first three months
12. ***Solanum torvum* Sw.** (Solanaceae) VN: Ana Chunda. 3-5 ml Leaf extract is given orally for 5days

Gediya, et al; 2011. In his review discussed herbal plants for its abortifacient activity with ethnopharmacological evidence of some herbal plants discussed in this review

Ruta graveolens : family Rutaceae has been used historically as tea to induce miscarriage by thousands of women all over the world from the Mediterranean, and Europe to Latin America and North America. Rue is a traditional abortifacient used by the Hispanic people in New Mexico. Rue contains two chemicals that we know have the ability to cause abortion during early pregnancy. One of the chemical substances is called philocarpine, which is used in veterinary medicine as an abortifacient for horses. The other is called Rutin, a bioflavinoid that hardens bones and teeth, strengthening arteries and veins. Rutin can be used to disrupt pregnancy and as an emergency contraceptive. It is contraindicated in individuals who have

poor kidney functions. When using rue, avoid long exposure to sunlight. May be irritating to the gastrointestinal tract.

Ferula assafoetida : belongs to family umbelliferae , is a plant native to Iran that has a strong sulfurous smell.Tthe common name of , asafoetida is devil's dung , gum asafoetida , hing. It containes 40-64% resins having. Ferulic acid esters (60%), free ferulic acid (1 .3%), asaresinotannols and farnesiferols A, B and C, coumarin derivatives (e.g. umbelliferone), coumarin-sesquiterpene coinplexes (e.g . asacoumarin A and asacoumarin B). The oleo gum resins of different Ferula species are not identical and many papers have documented their phytochemistry, reporting polysulfanes, complex acetylenes, and phenylpropanoids and sesquiterpene derivatives. Asafoetida has a folkloric reputation as an abortifacient and an emmenagogue.

On the basis of the reported ethnopharmacological studies, present review provides the list of medicinal plants which deals with abortifacient activities and used at folkloric level by different people of the world.

List of plants reported for their abortifacient activity at folklore level

S.No.	PLANT NAME	LOCAL NAME	FAMILY	PART USED	REFERENCES
1.	*Abrus precatorious Linn.*	Liquorice	*Fabaceae*	Seed	Mitra, et al; 2009
2.	*Acacia catechu (L.f.) Wild.*	Karingali	*Fabaceae*	Bark	Ajesh, et al; 2012
3.	*Achyranthus aspera Linn.*	Apang	*Amaranthaceae*	Fresh root	Mitra, et al; 2009
4.	*Achillea millefolium*	Yarrow	*Asteraceae*	------	Conover, 2003
5.	*Aegle marmelos*	Bael	*Rutaceae*	leaves	Sathiyaraj, et al; 2012
6.	*Aerva lanata Linn.*	Chaya	*Amaranthaceae*	Fresh root	Mitra, et al; 2009
7.	*Alangium salviifolium*	Ankol	*Alangiaceae*	Stem Bark	Gediya, et al; 2011
8.	*Alternanthera philoxeroides*	Alligator weed	*Amaranthaceae*	Fresh Plant	Mitra, et al; 2009
9.	*Ananas comosus (L.) Merr.*	Kannara	*Bromeliaceae*	Fruit	Ajesh,et al; 2012
10.	*Andrographis paniculata*	Nilavembu	*Acanthaceae*	leaves	Sathiyaraj, et al; 2012
11.	*Annona reticulata L. Seetha*	pazham/Atha	*Annonaceae*	Seed	Ajesh, et al; 2012; Mitra, et al; 2009
12.	*Aristolochia indica Linn.*	Isen mul	*Aristocholaceae*	Fresh Root	Mitra, et al; 2009
13.	*Artemisia vulgaris*	Mugwort	*Asteraceae*	------	Conover, 2003
14.	*Avicennia marina*	Peyara ban	*Avicenniaceae*	Leaf	Mitra, et al; 2009
15.	*Azadirachta indica*	Neem	*Meliaceae*	Leaf	Sathiyaraj, et al; 2012

16.	*Bambusa vulgaris*	Bamboo	*Poaceae*	Leaves	Yakubu and Bukoye; 2009
17.	*Bambusa vulgaris*	Bamboo	*Poaceae*	Leaves	Musa, et al; 2009
18.	*Barleria cristata Linn.*	Jhinti	*Acanthaceae*	Fresh Root	Mitra, et al; 2009
19.	*Bombax Ceiba Linn.*	Semal	*Bombacaceae*	Seed	Mitra, et al; 2009
20.	*Caesalpinia pulcherrima (L.) Sw.*	Rajamally	*Fabaceae*	Bark	Ajesh, et al; 2012
21.	*Carica papaya*	Papaya	*Caricaceae*	leaves	Sathiyaraj, et al;2012
22.	*Carica papaya L.*	Papaya	*Caricaceae*	Peal of fruit	Anuar, et al;2008
23.	*Carica papaya L.*	Kappalam	*Caricaceae*	Raw Fruit	Ajesh, et al; 2012
24.	*Chamaemelum nobile*	Chamomile	*Asteraceae*	------	Conover, 2003
25.	*Curculigo orchioides Gaertn.*	Nilappana	*Hypoxidaceae*	Tuber	Ajesh, et al; 2012
26.	*Cuscuta reflexa Roxb.*	Amarbel	*Cuscutaceae*	Whole Plant	Mitra, et al; 2009
27.	*Caulophyllum thalictroides*	Blue cohosh	*Berberidaceae*	------	Conover, 2003
28.	*Daucus carota*	Gaajar	*Apiaceae*	Whole Plant	Kumar, et al; 2011
29.	*Dendrophthoe falcate Linn.*	Banda	*Loranthaceae*	Fresh Stem	Mitra, et al; 2009
30.	*Dolichos trilobus L.*	Kattumuthira	*Fabaceae*	Whole Plant	Ajesh, et al; 2012
31.	*Ferula assafoetida*	Hing	*Umbelliferae*	Oleo gum resin	Gediya, et al; 2011
32.	*Gloriosa superba L.*	Menthonn	*Liliaceae*	Root Tuber	Ajesh, et al; 2012
33.	*Glycyrrhiza glabra*	Liquorice	*Fabaceae*	------	Conover, 2003
34.	*Gossypium hirsutum*	Cotton Root	*Malvaceae*	Bark	Gediya, et al; 2011
35.	*Guanicum officinale*	Pookwood	*Zygophyllaceae*	Aerial parts	Gediya, et al; 2011
36.	*Hydrastis canadensis*	Goldenseal	*Ranunculaceae*	-------	Conover, 2003
37.	*Hibiscus rosa-sinensis Linn.*	China rose	*Malvaceae*	Root bark	Mitra, et al; 2009
38.	*Jatropha curcus*	Jangli – arandi	*Euphorbiaceae*	Fruits	Gediya, et al; 2011
39.	*Melia azedarach*	Malaivembu	*Meliaceae*	Bark	Sathiyaraj, et al; 2012
40.	*Mentha pulegium*	Pennyroyal	*Lamiaceae*	Whole Plant	Gediya, et al; 2011., Conover, 2003
41.	*Meyna spinosa Roxb.ex Link*	Meyna	*Rubiaceae*	Pulp of ripe fruit and seed	Mitra, et al; 2009
42.	*Michelia champaca Linn.*	Champa	*Magnoliaceae*	leaves	Taprial, et al; 2013
43.	*Mimosa pudica*	Thottasurungi	*Mimosaceae*	Root	Sathiyaraj, et al; 2012
44.	*Momordica charantia L.*	Pavakka	*Cucurbitaceae*	Raw fruit	Ajesh, et al; 2012
45.	*Obligate hemiparasitic*	Mistletoe	*order, Santalales*	-------	Conover, 2003
46.	*Pleioceras barteri*	Abeji	*Apocynaceae*	Bark and Seed	Gediya, et al; 2011
47.	*Plumbago rosea Linn.*	Laal cheeta	*plumbaginaceae*	Root	Mitra, et al; 2009
48.	*Plumbago zeylanica L.Koduveli*		*Plumbaginaceae*	Root	Ajesh, et al; 2012
49.	*Prangos ferulacia*	Jashir	*Apiaceae*	Leaves	Kazerooni, et al; 2005
50.	*Rhynchosia rufescens*	Ramachempu	*Fabaceae*	Leaf	Ajesh, et al; 2012

	(Willd.) DC.				
51.	*Ruta graveolens*	Rue	*Rutaceae*	------	Conover, 2003; Gediya, et al; 2011
52.	*Semecarpus anacardium Linn.*	Bhela	*Anacardiaceae*	Root bark	Mitra, et al; 2009
53.	*Senna alata (L.)Roxb.*	Candle Brush	*Fabaceae*	leaf	Yakubu, et al; 2010
54.	*Solanum torvum Sw.*	Ana chunda	*Solanaceae*	Leaf	Ajesh, et al; 2012
55.	*Stephania japonica Thumb.*	Agnalata	*Menispermaceae*	Fresh root	Mitra, et al; 2009
56.	*Tanacetum vulgare*	Tansy	*Asteraceae*	------	Conover, 2003
57.	*Thevetia peruviana (Pers.) K. Schum.*	Kalke	*Apocynaceae*	Seed	Mitra, et al; 2009
58.	*Uraria lagopodiodes Desv.*	Sankarjata	*Fabaceae*	Whole plant	Mitra, et al; 2009

CONCLUSION

In India abortion is the major issue; in this article we have discussed elaborately about the need and proper way of abortion. Abortion is done by two techniques, one is allopathic/instruments used techniques, second is by using the abortifacient plants. These medical techniques have more side effects and they are cost effective, painful but herbal abortifacient plants are natural, low cost, less side effects and less pain caused to the body. Although the allopathic/instruments used techniques are effective and fast acting but highly risk associated methods, so there is a need of searching newer techniques from these plants, these plants also have better compatibility with the human body. So that we have selected nearly 58 medicinal plants and discussed elaborately regarding the topic. Nowadays government funding agencies are ready to insisting to do the research work under the plants. Traditional healthcare practices of indigenous people pertaining to human health are termed as ethnomedicine. Ethnomedicine is the mother of all other systems of medicine. Recently the importance of these traditional medicines has been realized worldwide as some of them proved to be very effective. Mannan tribal women of Idukki district use various plants for their health care especially for gynaecological problems and disorders. This work also gives scope for appropriate scientific studies on the phytochemical and pharmacological activities of the recorded plants for drug design.

The well known fact of today's growing population is lack of communication and research in the field of contraceptive agents and their proper usage and distribution in the society. Plants, since ancient times, have been used globally across varied cultures throughout the known civilizations as a valuable and safe natural source of medicines and as agents of therapeutic,

industrial and environmental utilities(Sathiyaraj,K., 2012).Still many of the developing and under developed countries depends on plants or plant products found in their locality for general treatments and many times their formulations are used as antifertility and abortifacient agents. An abortifacient agent have great market in the society as is a common drug in usage at every house hold and require much consideration because is directly related to fertility issues of a family and signifies the health of the entire generation as healthy mother gives birth to a healthy child. But lack of knowledge and lack of available treatments are participating in population rise and child birth defects. Generally it is considered that alternative medicines are safe and side effect free, cost effective, widely available mainly approachable for remote areas as they are herbally rich and mainly rely on herbs, as other treatments are not reachable to such places, but their consumption is scientifically not generalized because anything not taken in appropriate amount can leave its adverse effects. People need to be aware of what they are taking for what and what its long term effects are.

In the present study, 56 medicinal plants used for family planning are recorded and documented from different research papers. In spite of rapid progress and spread of modern medicine and surgery, faith in and popularity of traditional methods has not decreased. Recently the importance of these traditional medicines has been realized worldwide as some of them proved to be very effective and some other prescriptions of these traditional healers may be of benefit to human kind when thorough scientific analysis is conducted into their properties. There is an urgent need for the detailed scientific studies and also necessary steps should be taken to conserve the threatened species. Plant drugs used in the tribal and rural areas deserves detailed studies. The efficacy and safety of most of the traditional remedies of the tribal and rural people are required to be subjected to scientific verification particularly in chemical investigations.

Similar to above discussed issue major attention is required in this field of research to introduce proper justified natural therapeutic formulations to avoid the use of costly medications and their side effects on human population as well as to avoid the use of homemade formulations which are not investigated for their further effects but are in use due to their folklore popularity. Thus, investigators have a variable range of opportunity in this field as studies are required to be done to explore the exact reason of therapeutical uses of the above listed plants. Their clinical trials with possible extracts and doses are yet to be investigated and if found can be of great therapeutical purpose for the society.

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