Original Article   **CODEN: IJPNL6**

Ethnobotanical Review of Gynea Diseases

Anam Tanveer, Naveed Raja[*]

PMAS Arid Agriculture University, RWP, Pakistan

*Corresponding author e-mail: drnaveedraja@gmail.com

ABSTRACT

Gynea disease includes different types of diseases suffered by women throughout world. To treat these diseases with herbs is common practice which became less common after 50's but knows it again becoming popular. Tribal or local women's use available plants to deal with different diseases. The person under whose guidance this work is done is known by different word in different Tribes of different countries i. e Daye, Hakeem's, spiritual healers, clergymen, homeopath, Vaidya etc. Different diseases include Gynea cancers, Ectopic pregnancy, Pelvic pain, Sexually transmitted diseases (STD's), Menstrual problems etc. Literature review had revealed that most common problem suffer by women's are menstrual disorders while Vulvar cancer occur rarely. Aim of this work was to collect ethno-gynecological information. This review article reveals 400 plants that are used for gynecological diseases treatment alone or mixed either other plants or substances. Inventory include Plant name, Family, Area, Area vernacular name, Part use, Application, Preparation, Disease treated. Literature on Ethnobotanical use in treatment of Gynecological diseases worldwide was collected through online database. Total of 400 plants belonging to 86 families were recorded. Most dominant family is Fabeaceae (43 plants) followed by Amaranthaceae (28 plants) and Asteraceae (24 plants). The current documented study represents the native knowledge used by the tribal people for treatment of different gynecological aliments worldwide.

Keywords: Gynecology, Ethnobotany, Cancer, Menstruation, Ethno-gynecology, Menstrual disorders, Ectopic pregnancy, Endometriosis, Pelvic pain.

INTRODUCTION

Gynaecology/ gynecology is the medical exercises dealing with the healthiness of the female reproductive structure while Ethnobotany is the study of how people of a specific culture and area use native plants in their lives for their everyday health management and other requirements. R. E. Schultes defined ethnobotany as study of relationship existing between people of primitive civilizations and their environments Ethno-gynecology is evolving as a new branch which deals with the handling of disorders among tribal women, for example, abortion, menstrual unease, menopause syndrome, leucorrhoea, morning sickness, anti-fertility, delivery difficulties etc. Reproductive system and sexual disorders deals with any diseases associated with reproductive system i-e gonorrhea, syphilis and chlamydia etc. [1-5]. These infections are considered to be responsible to cause for acute symptoms,

chronic infection and serious late concerns such as ectopic pregnancy, infertility, cervical cancer and the unfortunate death of infants and adults.

WHO has acknowledged the role of Traditional Methods of Medicine and consider them a part of scheme to provide healthcare to the masses. Traditional medicines are achieving importance. Much of this wealth of traditional knowledge is being lost as traditional culture is slowly vanishing. According to the World Health Organization 65%-80% of the world's population practice traditional medicine as their main form of health care. Now a days, medicinal plants are preferred over the synthetic chemicals for the treatment of different diseases mainly because they contain neutralizing combinations for synergistic and /or have side-effects [6-10].

The frequency of traditional medicine use in pregnancy is estimated at 12-45% in several parts of Africa and 80% in South Africa and is as high as 80% in some countries as well. There are also reproductive diseases that local peoples have been treating and handling for ages containing sexual impotence, abortion, gonorrhea, irregular menstruation, leucorrhoea etc. Plants based medicines are the foundation of many of the new drugs used today for our numerous diseases. A wide range of herbal traditional treatments are used to enhance fertility, regulate the menstrual cycle, abortifacients or anti abortifacients. Preliterate native populations used plants that were existing in their native surroundings to treat sickness and promote healthiness. A rising number of ethnobotanical studies have newly been published on plants which are used for reproductive health in the tropics [11-13].

Different treatments have been used by people in Pakistan who have confidence in hakeems, spiritual healers, clergymen, homeopaths or even many quacks based mainly on the Unani medicinal system, which dates back to the Indus valley civilization(Sheikh and Hatcher, These are the earliest choice for problems such as infertility, psychosomatic troubles, epilepsy, depression and many other ailments. The traditional medicine part has developed as main source of health care, particularly in rural areas of the country. The main cause for getting complementary and alternative medicines healer is the affordable fee, proximity, availability, opinion of the community and family pressure. Pakistan has a very rich belief in the use of medicinal plants for the handling of various diseases. Controlled data on routine health outcomes do not occur in rural Pakistan. The World Health Organization's estimation of maternal death in Pakistan was demonstrated from predictions of deaths of mature females. Majority of the medicinal plants are found in the subtropical forests and temperate climates of northern Pakistan.

Gynecological diseases

Ectopic Pregnancy has been recognized by numerous risk factors. All pregnancies that advance outside the uterus, called an ectopic pregnancy (EP) and these are nearly always in the fallopian tube and infrequently located in an ovary or in the cervix, or even in the abdomen. These are more common in women with the following conditions: Tubal surgery, Endometriosis, Sexually transmitted diseases (STDs), intrauterine conception device (IUD) or Infertility. Symptoms of EP include Severe abdominal or pelvic pain, Shoulder pain, Light bleeding, Vomiting and Nausea with pain, Lower abdominal pain or Sharp abdominal cramps, Dizziness, weakness or fainting, if fallopian tube ruptures, bleeding and pain could be severe enough to cause fainting or Pain in shoulder, neck, or rectum or side of body. Risk factors of EP can be damaged fallopian tube (Smoking, Previous inflammatory disease, Previous ectopic pregnancy in fallopian tube, Fallopian tube surgery), Current use of IUD, STDs, Congenital abnormality of fallopian tube, ectopic pregnancy history, Unsuccessful tubal ligation or tubal ligation reversal, Infertility treatment, Hormonal factors and age (over 35) [14-18].

Gynecological Cancers include following types of cancers

Cervical cancer arises in the cells of the cervix. Symptoms include irregular bleeding, bleeding after menopause, pelvic pain, increased vaginal discharge, pain during intercourse. Risk factors of cervical cancer can be HPV viral infection, Not getting regular Pap tests, HIV, smoking, low fruit and vegetables diet, Chlamydia infection, Family

history of cervical cancer, Diethylstilbestrol. It can be diagnosed by Pregnancy test or ultrasound.

Endometrial cancer occurs in Lining of uterus and is most communal cancer in female. Symptoms include Post-menopausal bleeding, Bleeding or discharge (not due to menstruation), Pain during intercourse or urination, Pain in the pelvic area. Risk factor leading to endometrial cancer can be Early periods, Infertility, Late menopause, Obesity, Estrogen replacement therapy (ERT), Being treated breast cancer, Diet high in animal fat, Diabetes, endometrial cancer Family history, distinctive endometrial hyperplasia, breast cancer or ovarian cancer history, polycystic ovary syndrome history, Prior radiation therapy. It can be diagnosed by the help of Dilation and curettage, internal pelvic examination, biopsy, Pap test and Transvaginal ultrasound.

Breast cancer occurs due to abnormal or out of control cell growth in one or both breasts. Symptoms include formation of noticeable lump in breast which may not cause pain, unusual discharge from nipple, retracted nipple, persistence rash around nipple. No identified risk factor but odds of breast cancer increases with age. It can be diagnosed by help of Mammography and Family history.

Ovarian cancer develops in cells of ovary. Symptoms shows Distress in lower abdomen (appetite loss, feeling full, swollen, Gas, Indigestion, Nausea), constipation, Vaginal bleeding, build of fluid around lungs, Diarrhea. Risk factors leading to ovarian cancer can be Obesity, Age (above 55), History of breast/Colon cancer, Infertility, Family history, certain drugs, Hormone replacement therapy. Can be diagnosed by help of Ultrasound, Computed tomography, Lower gastrointestinal, intravenous pyelogram, Blood test and Biopsy.

Uterine cancer is broad term used for different parts of uterus. Symptoms of uterine cancer show abnormal and uncontrollable growth of uterus cells, abnormal bleeding, and Irregular menstrual cycle, Pain in pelvic area or during intercourse or during urination. Risk factors include Estrogen therapy, Early menarche, Late menopause, Breastfeeding, Medical conditions, Breast Cancer, Age, Obesity, Diabetes, Race, High-fat diet, Reproductive and

menstrual history, History of polycystic ovarian syndrome. It can be diagnosed by help of Transvaginal ultrasonography. Endometrial sampling. Medical history, Physical exam, Blood test, Chest X-rays, Computed tomography, Ultrasound, Distinctive examinations of the bladder [19-24].

Vaginal cancer occurs rarely in women. It is due to abnormal cells formation in vaginal tissues. Symptoms include Bleeding not related to menstrual cycle, Pain during intercourse or urination or in pelvic area, Constipation, Mass that can be felt, Foul smelling discharge. Risk factors Age, Medical history, HIV infection, HPV infection, vaginal adenosis, Smoking, Exposure to diethylstilbestrol while still in womb, Collection of fluid in upper part. It can be diagnosed by help Colposcopy, Computed tomography scan, Pelvic examination of the vaginal and pelvis, Biopsy, Positron emission tomography, Pap test, Magnetic resonance imaging (MRI).

Vulvar cancer occurs on any external part of vagina majorly on Labia (labia majora or labia minora), Clitoris or Bartholin's Glands. It occurs rarely. Symptoms include Vulva skin feels rough and looks white, severe burning or itching or pain, open sore that last for month, bleeding that is not due to periods. Risk factors leading to vulvar cancer can be Smoking, Diet, Medical history, Lichen sclerosis, HIV infections, Age, Melanoma, Vulvar intraepithelial neoplasia etc. It can be diagnosed by Biopsy [25-30].

Endometriosis is due to formation of endometrial tissues outside the uterus. Symptoms include Pain during periods or intercourse, Infertility, Painful urination during periods, Other Gastrointestinal upsets (like diarrhea, nausea, and constipation), Chemical sensitivities, Fatigue, Allergies, Yeast infections or Painful bowel movement. Causes of endometriosis are not known. Risk factors include Medical history, uterine abnormalities, Disease history in first degree relatives, never giving birth. It can be diagnosed by laparoscopy, ultrasound, Biopsy, Magnetic resonance imaging (MRI), Computed tomography.

Pelvic pain occurs in lower abdomen and due to its source of origin it can be acute or chronic. it can cause due to

inflammation, PID, Muscle contractions, Appendicitis, Rapture fallopian tube, Miscarriage, Cancer, Uterine fibroids etc. It can be diagnosed through blood test, CT, ultrasound, Pregnancy test, Urinalysis, Laparoscopy and X-rays.

Polycystic Ovarian Syndrome (PCOS) is common reproductive and hormonal problem. Its causes are unknown but it effects ovulation. Its symptoms include pimples, Skin tags, irregular menstruation, Hirsutism, Infertility, Overweight, Metabolic disorders (like Diabetes, high BP etc). It can be diagnosed by Ultrasound and Pelvic Examination.

Fibroids are tumors frequently found in women. Causes are unknown but women near there menopause are more at risk of fibroids. Symptoms include lower back pain or pain during intercourse, frequent urination, abnormal bleeding, Heavy periods etc. It can be diagnosed by help of Ultrasound, Biopsy, Blood test, Hysteroscopy, MRI.

Sexually Transmitted Diseases are infections transmitted sexually (through sexual interaction). Common kinds contain Human Immunodeficiency Virus (HIV), Human papillomavirus (HPV), Chlamydial infections, Genital herpes, Gonorrhea etc.

Menopause when women periods stop permanently. It generally occurs at age above 35. Temporary period of time before menstruation truly stops is called Perimenopause. Every women experience menopause symptoms differently.

Post-Term Pregnancy last more than 42 week and is considered post-term pregnancy. Majority women deliveries occur between 37 and 42 weeks of pregnancy. Causes are unknown. In Pakistan, 27% of maternal deaths are attributed to postpartum hemorrhage and 65% of births occur at home.

Menstrual Disorders are related to menstrual cycle and are of different types.

Amenorrhea is the absence of menstrual cycle. Cause includes poor diet, low body weight, Emotional stress, Hormonal problems, Medications etc. [31-35].

Menorrhagia is prolonging bleeding during menstruation. Condition causing it includes Endometriosis, Medication,

Cancer, Hormonal imbalance, Pregnancy complications, uterine fibroids and other medical conditions.

Dysmenorrhea is the pain and/or discomfort before menstrual cycle. Conditions include STDs, Ovarian cyst, Endometriosis, uterine fibroids, Pelvic inflammatory disease.

METHODS AND METHODOLOGY

Literature on treatment of Gynecological diseases with the help of plants worldwide was composed through online database

Data analysis

Data collected on ethnobotanical use of plants for Gynea diseases treatment was analyzed and plant families along with medicinal plants were ranked on number of species contributed. Number of each plant was cited on basis of number of times plant was reported in literature.

RESULTS AND DISCUSSION

Inventory of all plants used in ethno-gynecology are listed in two tables. Tables contain Family name, Plant species, Area, Localname, Part used, Disease treated, references, Application and Preparation.

Total of 400 plants belonging to 86 families were used for ethno-gynecological diseases treatments. Most dominant family was Fabeaceae (43 Species, 10. 75%) followed by Amaranthaceae (28 Species, 7%) Asteraceae (24 Species, 6 %), Malvaceae (18 Species, 4. 5%) Euphorbiaceae (17 Species, 4. 25%), Moracea (17 Species, 4. 25%), Apocynaceae, Combretaceae and Poaceae 12 Specieseach (3%). Lamiaceae (11 Species, 2. 75%), Anacardiaceae and Ebenaceae (10 Species, 2. 5%), Asphodelaceae (7 Species, 1. 75%), Annonaceae, Capparaceae and Commelinaceae 6 Species each (1. 5%), Liliaceae, Meliaceae and Verbenaceae 5 Species each (1. 25%), Apiaceae, Cyperaceae, Dipsacaceae and Solanaceae 4 Species each (1%), Acanthaceae, Amaryllidaceae, Aristolochiaceae, Bombaceae, Caryophyllaceae, Cucurbitace, Cuppressaceae, Equisetaceae, Geraniaceae, Musaceae, Myrtaceae, Thymelaeaceae and Xanthorrhoeaceae represent 3 Species each (0. 75%), Arecaceae, Arecaceae, Asclepiadaceae, Asparagaceae,

Bignoniaceae, Caesalpiniaceae, Caricaceae, *Dennstaedtiac*, Flacourtiaceae, Lythraceae, Maesaceae, Menispermaceae,

Papilionaceae, Phyllanthaceae, Piperaceae, Scrophulariacee , Urticaceae and Zygophyllaceae 2 Species each (0. 5%) while rest of 31 families represent 1 species each (0. 25%).

Different plants are used for treatment of Abortification (39 species), Amenorreha (18 species), Antiabortification (6 species), Anti-cancer (5 species), Breast cancer (6 species), Different cancers (14 species), Contaceptive (5 species), Delivery problems (8 species), Dysmenorrhea (37 species),

Gonorrhea (14 species), Infertility (59 species), Leucorrhea (38 species), Menorrhagia (89 species), Mensturation (59 species), Pregnancy related problems (13 species), Uterus (12 species) and White discharge (15 species).

Most commonly used plant part are Root (140 species) followed by Leaves (96 species), Bark (44 species), whole plant (34 species), Seed (24 species), Stem (14), Fruit (14 species), flower (11 species), tuber (4 species), Inflorescence (3 species) throne (1 specie). Plant parts used by 24 species were unspecified.

CONCLUSION

This study represents broad list of traditional plants used for treatment of gynecological diseases worldwide. Most of the plants used in treatment of mesentral disorders and Infertility. Ethno-gynecology is more common in China, India and Africa. Most of the tribal women prefer use of native plants for their problems by previous knowledge or by consulting herbalist. Many diseases can be prevented if there risks factors are treated carefully and completely as causing factors of many diseases are not known. It is hoped that this review will cause more awareness about usage of medicinal plants and for further studies.

REFRENCES

1. Z. Abraham., Glimpses of Indian Ethnobotany: Oxford and Publishing Co., **1981**. New Delhi.

2. W. M. Ankum, B. W. Mol, F. van der Veen., *Fertile. Steril*. **1996**, 65: 1093-9.

3. Anonymous. **2013**. Endometriosis risk factors (http: //www. mayoclinic. org/diseases conditions/endometriosis/basics/risk factors/con-20013968).

4. Anonymous. **2013**. Pelvic pain (http: //www. mayoclinic. org/symptoms/pelvic-pain/basics/definition/sym-20050898).

5. Anonymous. **2014** WebMD, LLC. All rights reserved. (www. webmd. com/baby/guide/pregnancy-ectopic-pregnancy? Page=2).

6. Anonymous. **2015**. Cervical cancer (http: //www. mayoclinic. org/diseases-conditions/cervical-cancer/basics/definition/con-20030522).

7. Anonymous. **2015**. Endometriosis (http: //www. medicinenet. com/endometriosis/article. htm).

8. Anonymous. **2016**. Cancer Of The Vagina (http: //www. womens-health-advice. com/vaginal-cancer/index. html).

9. Anonymous. **2016**. Cervical Cancer (http: //www. medicinenet. com/cervical_cancer/article. htm).

10. Anonymous. **2016**. Endometriosis (https: //www. uahealth. com/library/sections/article/endometriosis-1).

11. Anonymous. **2016**. Endometriosisassn (http: //www. endometriosisassn. org/endo. html).

12. Anonymous. **2016**. Menstrual Problem (http: //www. healthcommunities. com/menstruation/menstrual-problems. shtml).

13. Anonymous. **2016**. Pelvic pain (https: //www. uahealth. com/library/sections/article/pelvic-pain).

14. Anonymous. **2016**. Polycystic ovarian syndrome (https: //www. uahealth. com/library/sections/article/polycystic-ovarian-syndrome-pcos).

15. Anonymous. **201**6. Post term pregnancy (https: //www. uahealth. com/library/sections/article/post-term-pregnancy).

16. Anonymous. **2016**. Sexually transmitted diseases (https: //www. uahealth. com/library/sections/article/sexually-transmitted-diseases).

17. Anonymous. **2016**. Utrine fibroids (https: //www. uahealth. com/library/sections/article/uterine-fibroids).

18. Arnold, H-J. and M. Gulumian., J. Ethnopharmacology. **1984**, 12: 35-74.

19. Banner University Medical Center. **2016**. Gyneacological cancers (https: //www. uahealth. com/library/sections/article/gynecological-cancers).

20. M. A. Belsey., Bulletin of the World Health Organization, **1976**, 54: 319-341.

21. F. Bohlmann, and M. Wallmeyer., *Phytochem*. **1982**, 21(5): 1157–1952.

22. J. Bouyer, E. Rachou, E. Germain.,. *Fertil Steril*, **2000**, 74: 899-908.

23. J. Bouyer, J. Coste, T. Shojaei, J. Pouly, H. Fernandez, L. Gerbaud and N. Job-Spira., *Am. J. Epidemiol*. **2003**, 157: 185–194.

24. D. Bown,. Encyclopedia of herbs and their uses. London: Dorling Kindersley, **1995**, Pp. 424, 38.

25. M. Brink, and E. G. Achigan-Dako., Plant Resources of Tropical Africa. Fibres. Wageningen, Netherlands. **2012**, 16, P 417.

26. J. Broster., **1982**. Amagqirha. Via Africa, Cape Town.

27. J. Bruneton., Pharmacognosy, Phytochemistry, Medicinal Plants. Intercept, Hampshire, **1995**.

28. A. T. Bryant., C. Struik. **1966**, Cape Town.

29. S. Chandra, and D. S. Rawat., *Integr. Med. Res*. **2015**, 4: 123-131.

30. W. H. Chow, J. R. Daling, W. Cates., *Epidemiol. Rev*. **1987**, 9: 70-94.

31. J. Coste, J. Bouyer and N. Job-Spira., *Fertil. Steril*. **1997**, 67: 791-2.

32. J. Coste, N. Job-Spira, B. Aublet-Cuvelier., *Hum. Reprod*. **1994**, 9: 742-5.

33. J. Coste, N. Job-Spira, H. Fernandez., *Am. J. Epidemiol*. **1991**, 133: 839-49.

34. I. Dovgii, V. Grishkovets, V. Kachala and A. Shashkov., *Chem. Nat. Compd*., **2005**, 41: 200–204.

35. Ectopic pregnancy-United States. MMWR Morb Mortal Wkly Rep., **1995**, 44: 46–8.