

Review Article

Review on PCOD/PCOS & its Treatment in different Medicinal Systems – Allopathy, Ayurveda, Homeopathy

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Abstract:

As Polycystic Ovarian Syndrome (PCOS) / Polycystic Ovarian Disease (PCOD) is multifaceted problem with reproductive endocrine and metabolic dysfunction. PCOS is also called as Stein-leventhal Syndrome after two doctors who first described it in 1935^[1] PCOS is one of the most endocrinopathy affecting women.^[2] The Rotterdam 2003 criteria defines PCOS as incidence of any two of 3 key criteria namely, oligo ovulation and anovulation, hyperandrogenism and polycystic ovaries [PCO].^{[2][3]} PCOS is found to be the most common reason for menstrual irregularities in 4-12% of women of reproductive age [12-45 yrs old].^{[4][5]} 5-10% of women develop PCOS during their teenage or child bearing years.^[6] Worldwide PCOS affects up to 6-7% of the population. However, the prevalence specific to the country vary extensively. In India, the incidence of PCOS/PCOD is on the hike; nearly 35% of women suffer from it. Symptoms of PCOS/PCOD are irregular, infrequent periods within 3 or 4 years of starting menstruate light or very heavy bleeding during period weight gain, excessive hair growth to varying degrees on face, chest, and lower abdomen. In this review paper the treatment of PCOS with different medicinal system namely Ayurveda, Homeopathy and Allopathy taken into account to compare and analyse best curable medicinal system for PCOS. Allopathy does not cure PCOS, but helps in managing and controlling effects while Ayurveda and Homeopathy can be considered as best cure and promising treatment with no side effects

Keywords: PCOS/PCOD, polycystic ovaries, syndrome, follicles, cysts, menses, GnRH, homeopathy, ayurveda, allopathy, diabetes mellitus, anovulation, hormone.

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Introduction

Polycystic Ovarian Syndrome also known as PCOS OR PCOD [Polycystic Ovarian Disorder] is a very common hormonal disorder and a leading cause of female infertility worldwide. PCOS is also called as Stein-leventhal Syndrome after two doctors who first described it in 1935^[1] PCOS is one of the most endocrinopathy affecting women. ^[2] The Rotterdam 2003 criteria defines PCOS as incidence of any two of 3 key criteria namely, oligoovulation and an ovulation, hyperandrogenism and polycystic ovaries [PCO].^{[2][3]} Poly cystic Ovarian Syndrome (PCOS) is a condition in which women typically have many number of small cysts around the edge of their ovaries. Polycystic ovaries mean the ovaries containing a large number of cysts that are not bigger than 8mm and develop more follicles than normal every month. Polycystic ovary start maturing at least twice as many follicles compared normal most of which enlarge and mature but do not release an egg. The cysts are the egg containing follicles that do not develop properly because of hormone A imbalance.

Some women go on to develop PCOS [Polycystic Ovarian Syndrome] which

means they have other symptoms including polycystic ovaries. PCOS may be heredity as well. Studies shows that women with family history of polycystic ovaries are 50% more likely to develop PCOS. PCOS is found to be the most common reason for menstrual irregularities in 4-12% of women of reproductive age [12-45 yrs old].^{[4][5]} 5-10% of women develop PCOS during their teenage or child bearing years.^[6] Worldwide PCOS affects up to 6-7% of the population. However, the prevalence specific to the country vary extensively. In India, the incidence of PCOS/PCOD is on the hike; nearly 35% of women suffer from it. Symptoms like irregular, infrequent periods within 3 or 4 years of starting menstruate lighter very heavy bleeding during period weight gain, excessive hair growth to varying degrees on face, chest, and lower abdomen. Moderate abdominal discomfort during periods, acne, and excessive skin growth on neck or in armpit also called as skin tags. Bone pain [arthralgia] and hair loss [alopecia], constipation, flauntulence, and indigestion. PCOS is also called as polycystic ovary disease [PCOD], Stein-Leventhal syndrome, ovarian hyperthecosis and sclerocystic ovary syndrome.

PATHOGENESIS

Complete understanding of pathogenesis of PCOS is still lacking due to heterogeneity of this disorder. There are most likely multiple underlying pathophysiological mechanisms. Various theories have been proposed to explain the pathogenesis of PCOS/PCOD. ^[7] They are as follows:

- a. An alteration in gonadotropin releasing hormone secretion results in increase of LH secretion. [lutening hormone]
- b. An alteration in insulin secretion; leads to hyperinsulinemia and insulin resistance.
- c. Defect in androgen synthesis that leads to increase in ovarian androgen production.

LH (Leutinizing Hormone):

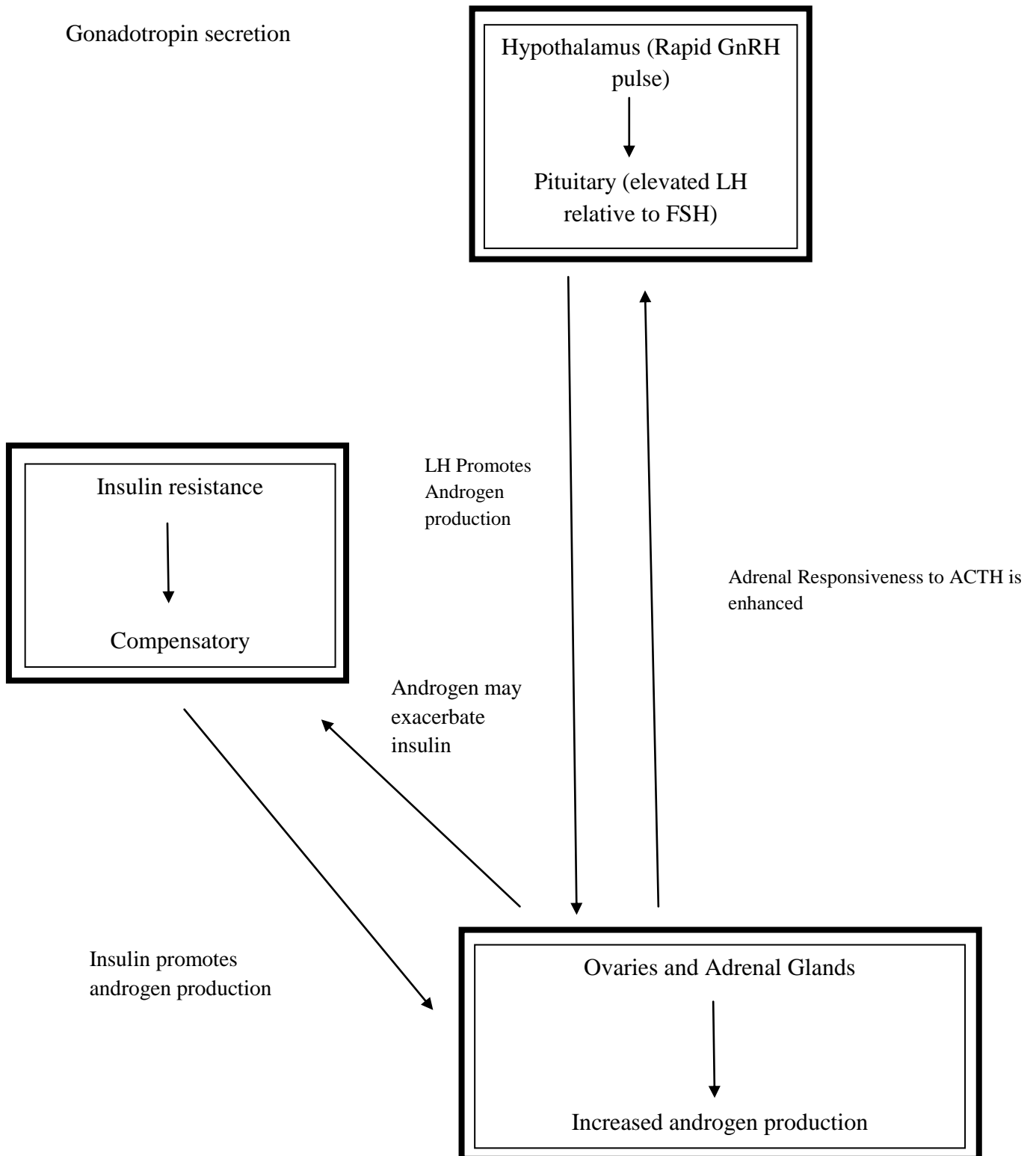
LH hyper secretion is a main cause of infertility and miscarriage in women having PCOS/PCOD. Many theories have been introduced for the etiology of over secretion of LH by pituitary gland. These include hypothalamic dysfunction, reduced pituitary sensitivity to gonadotropin releasing hormone [GnRH] and increased pulsatility of GnRH. Increase in LH leads to increase in androgen production by theca cells within the ovary.^{[8] [9]}

Hyperandrogenism or Androgen excess:

Hyperandrogenism is one of the primary symptoms of PCOS/PCOD. Increased or elevated level of circulating androgen is observed in 60-80% of women with PCOS. ^{[10] [11] [12] [13] [14] [15]}

Clinical features of hyperandrogenism in women with PCOS include acne, hirsutism, and androgenic alopecia [hair loss]

Insulin may modulate
Gonadotropin secretion



Hyperinsulinemia and Insulin resistance [IR]:

Hyperinsulinemia is a condition in which there is excess level of insulin circulating in the blood relative to the levels of glucose. Hyperinsulinemia can result from a various metabolic diseases and condition, one of which is PCOS/PCOD. Whereas insulin resistance is a pathological state or condition in which the ability of cells to respond to normal action of hormone insulin is diminished. Insulin resistance further leads to development of Type 2 diabetes mellitus. ^[16]30-40% of women affected with PCOS have impaired glucose tolerance and 10% of women to develop type 2 diabetes mellitus by the age of 40 yrs. ^[17] ^[18] Insulin acts collaboratively with LH to enhance androgen production in the ovarian theca cells. It also decreases hepatic synthesis and sex hormone binding globulin secretion, hormone which binds testosterone in circulation therefore increasing the amount of free testosterone which is biologically available. ^[19] ^[20] Women with PCOS/COD and hyperinsulinemia have free testosterone, but the total concentration of testosterone may be at the upper level of normal or modestly elevated. ^[21]

Causes: The main cause of PCOS/PCOD is unknown both environmental and genetic factors are implicated. Causes of PCOS are as follows: ^[22]

1. Genetic susceptibility
2. Raised levels of insulin
3. Hormonal imbalance
4. Contraceptive pills

5. Strong stimulation in adrenal in childhood
6. Obesity
7. Hereditary factors
8. Sedentary lifestyle
9. Stress
10. Diabetes
11. Insulin resistance
12. Hyperprolactinemia
13. Cushing's syndrome
14. Congenital adrenal hyperplasia

Signs & symptoms

Symptoms of PCOS vary from women to women. ^[23] Some of them are as follows:

1. Infertility- by preventing ovulation. ^[24]
2. Irregular, scanty, absent menses
3. Amenorrhea [30-40% of women]
4. Oligomenorrhea [85-90% of women]
5. Hirsutism
6. Hyperandrogenemia
7. Acne, oily skin, dandruff
8. Depression or anxiety
9. Pelvic pain
10. Hair loss or male pattern baldness ^[21]

11. Weight gain or obesity^[25]
12. Metrorrhagia
13. Swollen breasts before period
14. Bleeding with uterine fibroids during menses
15. Neuralgic pain during menses
16. Hysteria
17. Itchy vagina and vulva
18. Heavy periods
19. Sleep apnea
20. Cysts on ovaries
21. Skin tags
22. High blood pressure^{[26] [27]}

Progression:

The condition PCOS is a very common hormonal disorder that can occur any time in women's life. Depending on when it occurs effects vary. PCOS caused during adolescence and adulthood will cause reduced or no periods or menses, polycystic ovaries, obesity, and excess sex hormone levels. Whereas if caused in ageing individuals it causes diabetes, high blood pressure, abnormal blood lipid i.e. cholesterol level also called as metabolic syndrome.^[28] The term " Syndrome XX " has been coined as name for PCOS.^[29]

Diagnosis:

There are several tests to diagnose PCOS/PCOD. Doctor follows following steps to confirm PCOS/PCOD:

- a. Medical history: Menstrual periods, weight changes and other symptoms are observed.
- b. Physical Examination: Measure blood pressure. Body Mass Index [BMI], and waist size, checking the areas of increased hair growth for Hirsutism.
- c. Pelvic Exam: Examination for enlargement of ovaries or swollen by increase number of cysts.
- d. Blood Test: Blood test for hormone androgen and glucose levels.
- e. Vaginal ultrasound sonogram/sonography:

Use of sound waves to take picture of pelvic area for ovarian cysts and for checking the endometrium thickness of womb.

Treatment

PCOS/PCOD has received scant attention in the social science literature. The approach to manage PCOS, first line of treatment is by Ayurveda, homeopathy and or allopathy. Even a combination of homeopathy and allopathy is adopted.

Ayurveda:

Ayurveda classifies PCOS as a kapha disorder/doshas. Vata is responsible for movement of follicle during ovarian cycle the rupture of the ovarian wall release the matured ovum to the movement of fimbriae the finger like projections that guide the ovum into fallopian tubes and movement of ovum towards the uterus.

PCOS is due to kapha blocking vata and pitta. Hence granthiadhara [cystic swelling], arbudha [glandular swelling] [tumour formation]. Apanavayudushti or margavarodhjanya [obstructed channels and transformation process is suppressed]. Apanavayu in artavavahasrota becomes sanga or stagnant due to excessive kapha and ama accumulation blocks the channel impeding the flow of vata in the ovarian cycle. Asvata is blocked, pitta is also blocked as well, pitta in order to act as the intelligence behind transformation needs the movement of vata in order for its energy to have potential. The accumulated kapha is expressed in formation of cyst in the ovary as it takes on heavy white sticky quality expressing kapha and ama.

Menstrual problems manifest due to aggravation of all tridoshas but mainly due to apanavayu. Therefore it should be treated before pitta and kapha – Astanga Hrdayam. Medicines like daruhaldi roots, apple cider vinegar with mother. Line of treatment in which Kanchnarguggul, Varunadhikwath with bide laxative like sagargota added to these hypoglycemic drugs. In panchkarma at first vaman, virechan, bastikriya, nasyain induced. Drug or generic preparations like ashwagandhaarishta, ashokarishta, kumariasava, M2Tone, chandraprabhavati, abrahmbhasma, raupyabhasma, phalghrita with moderate exercise like pranayama, simhasan, vjrasan, shalabhasan, sarvangasan is also helpful. The treatment are long term in nature apart from being cost effective with no side effects.

Allopathy:

Allopathy treatment depends on basis of hormonal imbalance and the major treatment induces HRT [Hormone Replacement Therapy] where ensuing hormones are administered after evaluation of the patient. Apart from that there is growing misconception that PCOS occurs due to malfunction of the insulin hormone and hence diabetic drugs like Metformin a oldest insulin sensitizer may also be prescribed.^[30] Surgery is also exercised where the ovary is pierced or perforated or the cystic tissue is destroyed for better hormonal gain. In taking hormones it further depletes endocrinal system and puts them in sleep. The stuff which has to be naturally released by the body once received with artificial means put the body in a lazy mode. The HRT treatment may give good results but is not recommended in long run as it causes other problems.

The drugs commonly used in allopathy for treatment in women with PCOS are metformin which can lower TSH levels and hypothyroidism.^[31] PCOS is strongly associated with pre eclampsia, premature birth, more than double risk of GDM and birth of large for gestational age infants.^[5] As a part of treatment sometimes a drug called Clomiphene combined with low doses of Dexamethasone a steroid which suppresses androgen production from adrenal glands. An allopathic medicine doesn't have cure, but their medicines to manage PCOS/PCOD leads to numerous side effects. If the intake of medicines is stopped PCOS/PCOD reoccurs. Root cause of the problem should be treated and allopathic medicine fails to do that. Allopathic PCOS/PCOD treatment are not

without fair share of side effects including bloating, pelvic pain, night sweat or vasomotor symptoms, blurred vision, pale yellow eyes and skin, malnutrition, heavy menstrual period or bleeding between periods.

Homeopathy:

PCOS/PCOD finds promising treatment with homeopathic mode of system. Homeopathic mode of treatment is very safe and free from any side effects. Homeopathic medicines include dynamically potentized or powerful dominant influential drugs form of pills, powder, liquids, which includes less medicinal substances and greater energy. Since it consist more energy it has more capability to penetrate the system at deeper levels. Homeopathic medicines work on correcting hormonal imbalance, regularizing ovulation, restoring menses normalcy.

Some homeopaths or proponents of homeopathy also claim that it helps in dissolving or solubalizing the cysts to eliminate the hormone therapy and surgery that promise complete cure for condition. Homeopathy focuses on treating and curing the root cause of problem. Combination of homeopathic constitutional treatment with exercise just like 30minutes walk, aerobics, swimming etc is done. Homeopathic medicines like Apis, Pulsatilla, Sepia, Lachesis and Graphites are often used in treatment of PCOS/PCOD. Sepia is a bestcure for PCOS while Pulsatilla is used for suppressed menses for long duration. Calcarea Carb used for prolonged and profuse period. Natrum mar cure for PCOS

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with irregular or suppressed menstrual cycles. Thujaoccidentalis is used in retarded menstrual flow. Thuja has innate ability to dissolve abnormal growth or accumulation in the body. It is also helpful in treatment of extreme hair growth on unusual parts in women due to hormonal imbalance. Another treatment is Lycopodium [LYCO] is used for vomiting, indigestion, bloating, constipation, anxiety and insomnia. Lacheisis used in PCOS for blood poisoning, circulation difficulties with menstruation, menopause, tonsillitis and uterine problems. OOPHORINUM is also found to be useful in certain patients. Homeopathic treatments are free from side effects.

Discussion

As PCOS/PCOD is multifaceted problem with reproductive endocrine and metabolic dysfunction. PCOS is characterized by infertility, ovarian dysfunction, hyperandrogenism, insulin resistance and chronic anovulation while major metabolic consequences including obesity, type II diabetes and cardiovascular disease affecting 5-10 % of female population of developed countries. Symptoms like irregular, infrequent periods within 3 or 4 years of starting menstruate light or very heavy bleeding during period weight gain , excessive hair growth to varying degrees on face, chest, and lower abdomen. Moderate abdominal discomfort during periods, acne, and excessive skin growth on neck or in armpit also called as skin tags. Bone pain [arthralgia] and hair loss [alopecia], constipation, flauntulence, and indigestion. The treatment of PCOS with different medicinal system namely ayurveda, homeopathy and allopathy taken

into account to compare and analyze best curable medicinal system for PCOS. The treatment generally focuses on management of main concerns such as infertility, acne or obesity. The comparison of treatment in Ayurveda, Homeopathy, Allopathy system is considered to find out the system most effective in treating PCOD/PCOS. Conventional treatment systems varies or

differs as per the symptoms and also has some side effects. Comparing allopathy, homeopathy and Ayurveda, homeopathy and Ayurveda shows best curable effects compared to allopathy. As allopathy only aims at managing and controlling diseases. Comparison of treatment in Ayurveda, homeopathy, and allopathy is shown as follows:

| Sr No. | Symptoms | Homeopathy | Ayurveda | Allopathy |
|--------|--|---------------------------------|---|---|
| 1 | Early, scanty, dark, clotted menses | Liliumtigrum 6C, Agnuscastus 3X | Castor oil, aloe vera [kumari][Aloe barbadensis] | Drospirenone and estradiol |
| 2 | Amenorrhea, Bladder inflammation | Senecio , aureus 3X | Shatapushpa [Foeniculumvulgare], Triphala | Norethindrone, Pentosan, polysulfate sodium [elmiron], aspirin and ibuprofen. |
| 3 | Infertility | Folliculinum, Baryriamuriatica | Ashwagandhaarishta of roots with ashok bark ie. Ashok arishta | Clomiphene citrate ^[32] , tamoxifen, Metformin ^[33] |
| 4 | Heavy periods, painful uterus during periods | Calcareacarbonica | Ashwagandhaarishta of roots with ashok bark ie. Ashok arishta | Drospirenone and estradiol |
| 5 | Burning uterus | lachesis | Guluchyadikashayam | Oral contraceptives like medroxyprogesteroneetc |

| | | | | |
|----|---|---------------------|--|---|
| 6 | Metrorrhagia | Nux vomica | Puahyanugchoorna, Pradaranashakchoorna, Giloyatva, darvyadikwath, bangeshwararasa, bolabadha rasa, bolabadhaparpati, chandraprabhavati, kamadudharasa, lohabhasma, pradarantak rasa, pradararipu rasa, pradarantakaloha, pradarariloha, ashokaghrita, sup aripaka, durvadighrita, shatavari, ghrita, jeerakadia valeha | 1. oral contraceptive[ocp]: switch to levonorgestrel containing pill, avoid when OCP is contraindicated, limit ethinyl estradiol to no more than 35mg 2. Medroxyprogesterone acetate [provera], Norethindrone [Aygestin], micronized progesterone, levonorgestrel-releasing IVD [Mixena] ^{[34] [35] [36] [37]} |
| 7 | Swollen breast before period and bloating feeling | Pulsatilla | Trikaru powder, aloevera, licorice, tulsi, fennel, anantmul, punarnava, Castor oil. | NSAID'S like naproxen sodium, acetaminophen, ibuprofen |
| 8 | Neuralgic pain during menses and irregular menses | Xantoxilumfraxineum | Black cohosh, chamomile tea. | NSAID'S like naproxen[Naprosyn], birth control pills, xulane, Medroxyprogesterone acetate [provera], |
| 9 | Ovarian inflammation or ovaritis and ovarian cysts | Apis&apismellifera | Milk thistle | Letrozole, norethindrone |
| 10 | Chronic pelvic disorder, sterility, endometriosis, pelvic | medorrhinum | Kaisharguggul, triphalaguggul, kutki [picrorrhizakurrao] and punarnava | Doxycycline, metrodiniazole, gentamycin IV, ceftriaxone |

| | | | | |
|----|--|--------------------|--|--|
| | inflammation | | | |
| 11 | Burning vaginal discharge, painful intercourse | Lycopodium | Pushyanugachoorna, lodhra, patha, shalmali, yashtimadhu, glycerhizaglabra, kadalikanda, rasayana | Metrodiniazole, butoconazole, Clotrimazole, nystatin, tioconazole, Miconazole, clindamycin |
| 12 | Menstrual colic, threatened abortions | Secale | Guduchi, kankari [solanum xanthocarpum], gokshur, bhrungraj, yashtimadhu, pippali, manjistha, rasna [Pluchea lanceolata], bharangi [Clerodendrum serriatum] [39] | Spironolactone, cyproterone acetate and flutamide, dexamethasone [38] combined with clomiphene or prednisolone |
| 13 | Tumours and polyps of uterus | Buforana | Kanchanarguggul | NSAID'S like naproxen [Naprosyn], birth control pills, ibuprofen, danazol, progestin |
| 14 | Bleeding with uterine fibroids | Salix nigra 3X | Kanchanarguggulpradarantakchoorna, chandraprabhavati, formulation blend of shatavari, lodhra and asoka | Surgery, ibuprofen, Naprosyn, iron supplements, vitamin B12 or laser treatment. |
| 15 | Warts on vulva and perineum | Thuja occidentalis | Aldara, Six C ointment, Tankanabhasma, yavakshara, khadiarishta, Rasamanikya, Gandhakarasyana, Kanakabinduarishta, Panchanimbadi Gulika, Arogyavardhinivati | Podophyllotoxin, Imiquimod, Veregan, Trichloroacetic acid |
| 16 | Prolapsed uterus, enlargement of uterus | Fraxinus americana | Kanchanarguggul, curcumin longa, commiphora mukul [guggul], Bacopamoni [brahmi] | Pessaries and surgery |
| 17 | Malposition of uterus, itchy vagina and vulva, | Helonias | Dandelion, Shatavarikalpa [Asparagus racemosus] | Metformin [41] with careful monitoring, Troglitazone [42] [43] |

| | | | | |
|----|---|---|--|--|
| | diabetes mellitus and insipidus ^[40] | | | |
| 18 | Hysteria, sobbing and grief | Ignatiaamara, Nat mur, Aurum, Cocculus, Phosphoric acid | Mahaabhavati, apasmarantaka rasa, saraswatiarishta, marjatakasturi, mahakalyankaghrita, jatophaladichoorna | Sedative or Hypnotic medications like Trazodone, Lorazepam, Temazepam, Zolpidem, Chloral hydrate, Clonazepam, Dextroamphetamine, Methylphenidate |
| 19 | Uterine displacement | Lappa 3X | Mimosa pudica, Udumbar, Plaksh, Nyagrodha, neemshirish, haritaki, vibhitaki, babool, khadir, naagkesar, dhaaypushpa, mooshaditailam, dhatakyaditailam. | Mesalazine 500mg |
| 20 | Metritis | phosphorous | Trihala and shatavarikalpa, dronpushpi, ginger root tea, chadrakala rasa. | norethindrone |
| 21 | Haemorrhages, bruised feeling, uterine cramps | Thlaspi bursa, Pastoris6X | Trihala and shatavarikalpa, dronpushpi, ginger root tea, chadrakala rasa | Flurbiprofen, Mefenamic acid, Valdecoxib, Nimesulide, Meclofenamate, Estropipate. |
| 22 | Hypertrophied uterus | Ustilagomaydis 3X | Navayasloha, kanchnarguggul, abhrakbhasmahyponidtablet, pradnrakbhasma, giloyasatva | Estroprogesterone oral contraceptive pills |

Conclusion

PCOS is an increasing public health problem which is very common and leading cause of infertility in women. Polycystic ovarian syndrome or PCOS is a condition in which a women's level of sex hormone like estrogen and progesterone are imbalanced. Symptoms like irregular,

infrequent periods within 3 or 4 years of starting menstruate light or very heavy bleeding during period weight gain, excessive hair growth to varying degrees on face, chest, and lower abdomen. Moderate abdominal discomfort during periods, acne, and excessive skin growth on neck or in armpit also called as skin

tags. Bone pain [arthralgia], hair loss [alopecia], constipation, flauntulence, and indigestion. The treatment of PCOS with different medicinal system namely Ayurveda, homeopathy and allopathy taken into account to compare and analyze best curable medicinal system for PCOS. As allopathy is a method of treating disease with remedies/medications that produce effects different from those

caused by the disease itself. Allopathic medicines are limited, comparatively homeopathy have various options of medicine without any side effects for every symptom of PCOS/PCOD. Allopathy does not cure PCOS, but helps in managing and controlling effects while Ayurveda and Homeopathy can be considered as best cure and promising treatment with no side effects

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