

Comparative Study of Allopath and Ayurveda in the Management of Polycystic Ovarian (PCOD) Disease

BY

JUNAID TANTRAY

&

NASHRAH AFAQUE

CHAPTER 1

INTRODUCTION

Polycystic gonad unwellness (PCOD) additionally referred to as Polycystic Ovary syndrome (PCOS) could be a quite common condition affecting five-hitter to 100 percent of ladies within the people 12–45 years (**Colman M et al.,2014**). During this unwellness Woman's hormones area unit out of balance. It will cause issues with expelling periods and build it troublesome for her to conceive. Polycystic ovary syndrome, or PCOS, ladies of generative age is often liable to this unwellness. The characteristics which can kind on the ovaries, the syndrome is known as when although it's necessary to notice that this is often a signal and currently the underlying reason for the disorder. It's being noted that international prevalence of PCOS found that the prevalence of PCOS may well be as high as twenty sixth among some populations.

CAUSES

- The ovaries build feminine sex men hormones and a little quantity of male sex hormones (androgens). These facilitate regulate the conventional development of eggs within the ovaries throughout every cycle.
- Polycystic ovary syndrome is said to associate degree imbalance in these sex hormones. In PCOS, they start creating slightly additional androgens. This causes patients to prevent ovulating, grew pimples and grows extra facial and hair.
- Follicle's area unit sacs among the ovaries that contain eggs. Typically, one or additional eggs area unit free throughout every cycle. This is often referred to as organic process.

- In polycystic ovary syndrome, the eggs in these follicles do currently mature and area unit currently free from the ovaries. Instead, they'll kind terribly little cysts within the ovary, thence the name polycystic ovaries.

SYMPTOMS

- Acne
- Weight gain and trouble losing Weight
- Extra hair on the face and body. Usually girls get whicker, darker facial hair and a lot of hair on the chest, belly, and back.
- Whining hair on the scalp
- Irregular periods. Usually, girls with PCOS have fewer than 9 periods a year. Some girls don't have any periods other shave terribly significant hemorrhage
- Fertility issues. Many ladies United Nations agency have PCOS have trouble gawking pregnant(infertility)
- Depression

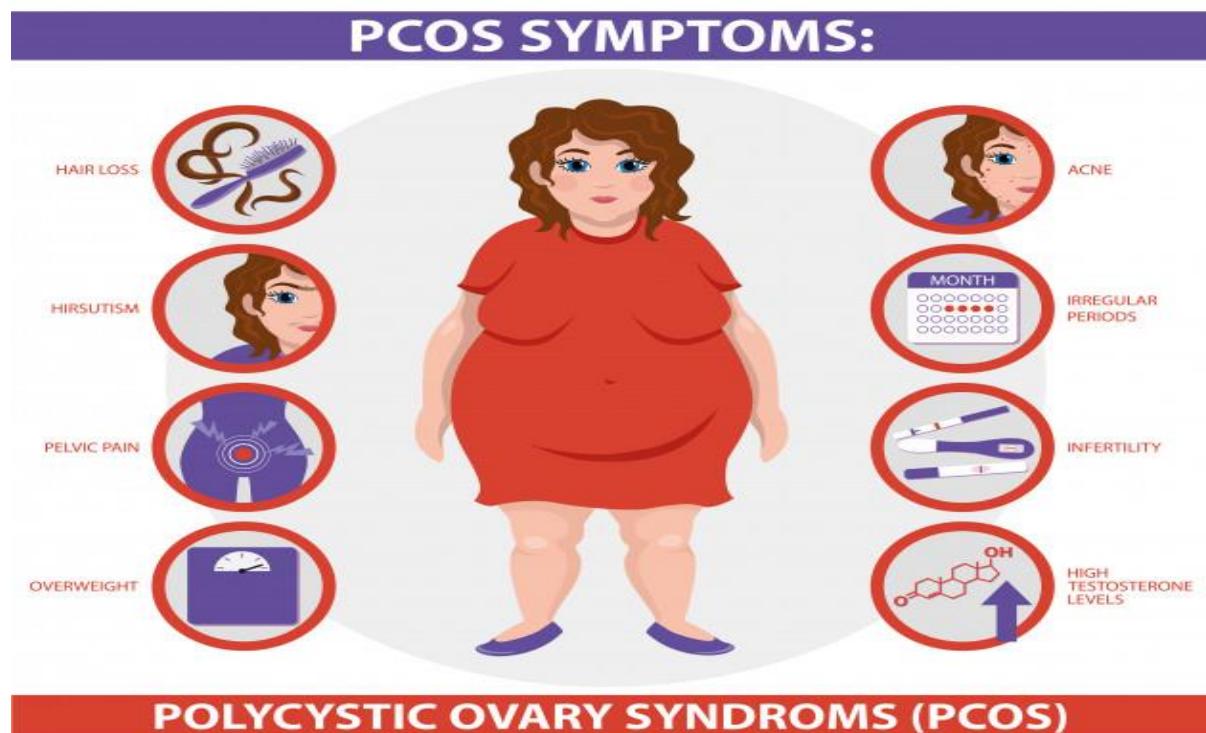


Fig no. 1: Polycystic Ovary Syndromes (PCOS)

Investigations like blood glucose estimation, thyroid secretion tests, ultrasound of the abdomen and pelvis are done. Sometime blood serum androgens, luteinizing secretion and different secretion estimations is also ordered.

History-taking, specifically for expelling pattern, obesity, hirsute and skin condition. A clinical prediction rule found that these four questions will diagnose PCOS With a sensitivity of seventy-seven.1% (95% confidence interval [CI] sixty-two.7%–88.0%) and a specificity of ninety-three.8% (95% CI eighty-two.8%–98.7%).

Gynecological ultrasonography, specifically searching for small ovarian follicles. These are believed to be the result of disturbed sex gland function with failing biological process, reflected by the infrequent or absent menstruation that's typical of the condition. During a normal menstrual cycle, one egg is discharged from a dominant follicle – in essence, a cyst that bursts to unharnessed the egg. When biological process, the vesicle remnant is reworked into a progesterone producing corpus luteum that shrinks and disappears when roughly 12–14 days. In PCOS, there's a supposed "follicular arrest"; i.e., many follicles develop to a size of 5–7 mm, but currently more. No single vesicle reaches the preovulatory size (16 mm or more). Per the Rotterdam criteria that are widely used for identification, twelve or a lot of little follicles ought to be seen in an ovary on ultrasound examination. newer analysis suggests that there ought to be a minimum of twenty-five follicles in AN ovary to designate it as having polycystic sex gland morphology (PCOM) in girls aged 18–35 years. The follicle is also oriented within the fringe, giving the looks of a 'swing of pearls'. If a high-resolution transvaginal ultrasonography machine is currently offered, a sex gland volume of a minimum of ten cubic centimeters is thought to be a suitable definition of getting polycystic sex gland morphology rather than vesicle count.

Laparoscopic examination could reveal a whiskered, smooth, pearl-White outer surface of the ovary. (This told sometimes be an incidental finding if laparotomy Were performed for a few different reasons, because it Told currently be routine to look at the ovaries during this thanks to ensure an identification of PCOS.

Blood serum (blood) levels of androgens (hormones related to male development), including androstenedione and testosterone may be elevated. Dehydroepiandrosterone sulfate levels on top of 700–800 μ g/dL are extremely suggestive of adrenal dysfunction as a result of DHEA-S is formed solely by the adrenal glands. The free testosterone level is thought to be the best live, [30] [31] with ~60% of PCOS patients demonstrating paranormal levels. The Free sex hormone index (FAI) of the magnitude relation of testosterone to sex hormone-binding globulin (SHBG)is high and is supposed to be a predictor of free testosterone, but may be a

poor parameter for This and isn't any better when testosterone alone as a marker for PCOS, probably as a result of FAI is correlate with the degree of fatness.

AYURVEDA

Ayurveda is an alternative medicine system with historical roots within the Indian landmass. The speculation and observe of written material is pseudoscientific. The Indian Medical Association (IMA) characterizes the observe of medicine by Ayurvedic practitioners as quackery. written material is heavily practiced in Bharat and Asian country, there around eightieth of the population report victimization It. Ayurveda therapies have varied and evolved over a lot of when international organization millennia. Therapies embody medicines, special dews, meditation, yoga, massage, laxatives, enemas, and medical oils. Medicines are typically supported complicated flavoring compounds, minerals, and meal substances (perhaps underneath the influence of early Indian alchemy or rasa shaswra). Ancient written material texts additionally taught surgical techniques, including rhinoplasty, calculus extractions, sutures, and therefore the extraction of foreign objects.

The main classical written material texts begin with accounts of the transmission of medical data from the gods to sages, So to human physicians. In SushrutaSamhIta (Sushruta's Compendium), Sushruwa Wrote that Dhanvantri, Hindu god of written material, incarnated himself as a king of Varanasi and taught medication to a gaggle of physicians, as well as Sushruta. Written material has been tailored for Western consumption, notably by Baba Hari Doss in the Seventies and Maharishi Ayurveda in the Eighties. Some students assert that written material originated in prehistoric times, which a number of the concepts of written material have existed from the wine of the Indus depression Civilization or even earlier. Written material developed considerably throughout the Vedic period and later a number of the non-Vedic systems like Buddhism and Jainism additionally developed medical concepts and practices that seem within the classical written material texts.

In written material texts, Dona balance is stressed, and suppressing natural urges is taken into account unhealthy and claimed to steer to sickness. Written material treatises describe where elemental divas viz. vata, pita and kappa, and swathe that balance {Skew. sāmyatva }of the dose as results in health, whereas imbalance {viṣamatva }results in sickness. Written material treatises divide medication into eight canonical components. Written material practitioners had developed varied meditative preparations and surgical procedures from a minimum of the start of the Common Era. There is no smart proof that written material is effective for

wreathing any sickness. Ayurvedic preparations are found to contain lead, mercury, and arsenic, substances better-known to be harmful to humans. During a 2008 study, on the brink of twenty first of U.S. and Indian-manufactured patent Ayurvedic medicines sold-out through the Interned Were found to contain deadly levels of heavy meals, specifically lead, mercury, and arsenic. The general public health implications of such metallic contaminants in Bharat are unknown.

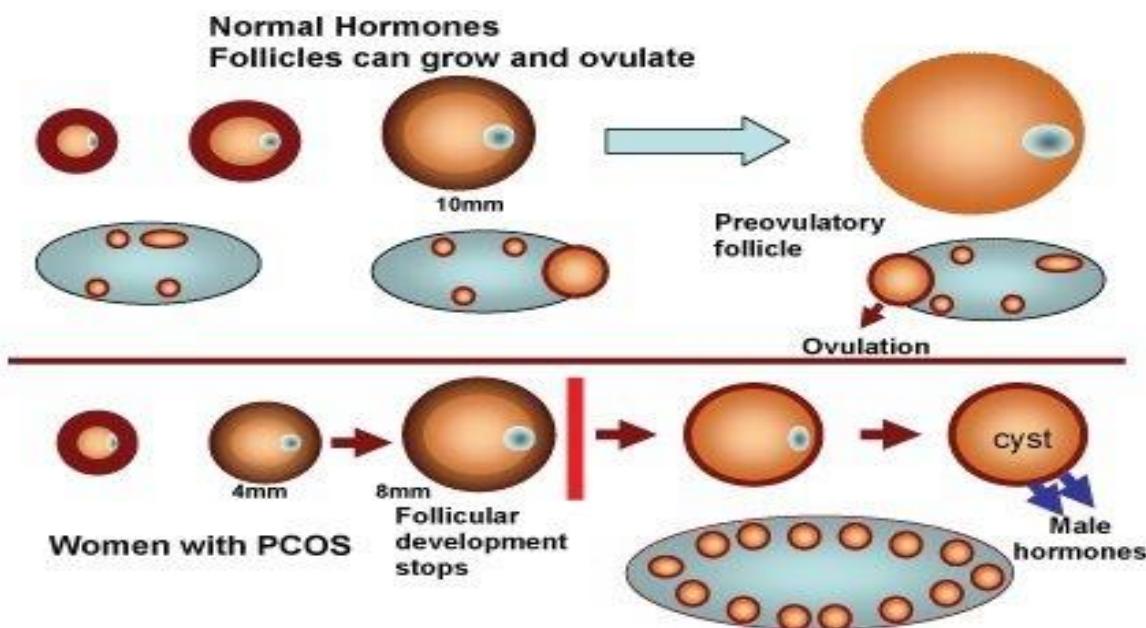


Fig.No.2: Abnormal Behavior of hormones in women having PCOS

ALLOPATHY

The system of medical practice which wreaths disease by the use of remedies Which produce effects different from whose produced by the disease under wreathen. MDs practice allopathic medicine.

The term "allopathy" Was coined in 1842 by C.F.S. Hahnemann to designate the usual practice of medicine (allopathy) as opposed to **homeopathy**, the system of therapy that he founded based on the concept that disease can be wreathed with **drugs** (in minute doses) thought capable of producing the same symptoms in healthy people as the disease itself.

Allopathic medicine, or **allopathy**, is an archaic term used to define science-based, modern medicine. There are regional variations in usage of the term. In the United States, the term is used to contrast with osteopathic medicine, especially in the field of medical education. The terms were coined in 1810 by the inventor of homeopathy, Samuel Hahnemann. It was originally used by 19th-century homeopaths as a derogatory term for heroic medicine, the traditional European medicine of the time and a precursor to modern medicine that did not rely on evidence of effectiveness. Heroic medicine was based on the belief that disease is caused by imbalance among the four "humors" (blood, phlegm, yellow bile, and black bile) and sought to treat disease symptoms by correcting that imbalance, using "harsh and abusive" methods to induce symptoms seen as opposite to those of diseases rather than treating their underlying causes: disease was caused by an excess of one humor and whose told be treated With Its "opposite". Among homeopaths and other alternative medicine advocates, "allopathic medicine" now refers to "the broad category of medical practice that is sometimes called Western medicine, biomedicine, evidence-based medicine, or modern medicine. "This description continued to be used to describe anything that was now homeopathy. The meaning implied by the label has never been accepted by conventional medicine and is still considered pejorative by some. William Jarvis, an expert on alternative medicine and public health, states that "although many modern therapies can be construed to conform to an allopathic rationale (e.g., using a laxative to relieve constipation), standard medicine has never paid allegiance to an allopathic principle" and that the label "allopath" was "considered highly derisive by regular medicine." Most modern science-based medical treatments (Antibiotics, vaccines, and chemotherapeutics, for example) do not fit Samuel Hahnemann's definition of allopathy, as they seek to prevent illness, or alleviate an illness by eliminating its cause.

CHAPTER 2

Test method For Glucose tolerance testing

- Fasting insulin level or GWW With insulin levels (also called IGWW). Elevated insulin levels have been helpful to predict response to medication and may indicate Women needing higher dosages of Metformin or the use of a second medication to significantly lower insulin levels. Elevated blood sugar and insulin values do now predict who responds to an insulin-lowering medication, low-glycemic diet, and exercise. Many Women with normal levels may benefit from combination therapy. A hypoglycemic response in which the two-hour insulin level is higher and the blood sugar lower when fasting is consistent with insulin resistance. A mathematical derivation known as the **HOMAI**, calculated from the fasting values in glucose and insulin concentrations, allows a direct and moderately accurate measure of insulin sensitivity (glucose-level x insulin-level/22.5).

Standard Assessment

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Gynecologic ultrasonography, specifically looking for small ovarian follicles. These are believed to be the result of disturbed ovarian function with failed ovulation, reflected by the infrequent or absent menstruation that is typical of the condition. In a normal menstrual cycle, one egg is released from a dominant follicle – in essence, a cyst that bursts to release the egg. After ovulation, the follicle remnant is transformed into a progesterone-producing corpus luteum, which shrinks and disappears after approximately 12–14 days. In PCOS, there is a so-called "follicular arrest"; i.e., several follicles develop to a size of 5–7 mm, but no further. No single follicle reaches the preovulatory size (16 mm or more). According to the Rotterdam criteria, which are widely used for diagnosis, 12 or more small follicles should be seen in an ovary on ultrasound examination. More recent research suggests that there should be at least 25 follicles in an ovary to designate it as having polycystic ovarian morphology (PCOM) in Women aged 18–35 years. The follicles may be oriented in the periphery, giving the appearance of a 'string of pearls'. If a high-resolution transvaginal ultrasonography

machine is now available, an ovarian volume of at least 10 ml is regarded as an acceptable definition of having polycystic ovarian morphology instead of follicle count.

CHAPTER 3

PATHOGENESIS (With diagram and how to generate PCOD and PCOS)

Pathophysiology of PCOS

Alex Rotstein, Ragini Srinivasan, and Eric Wang

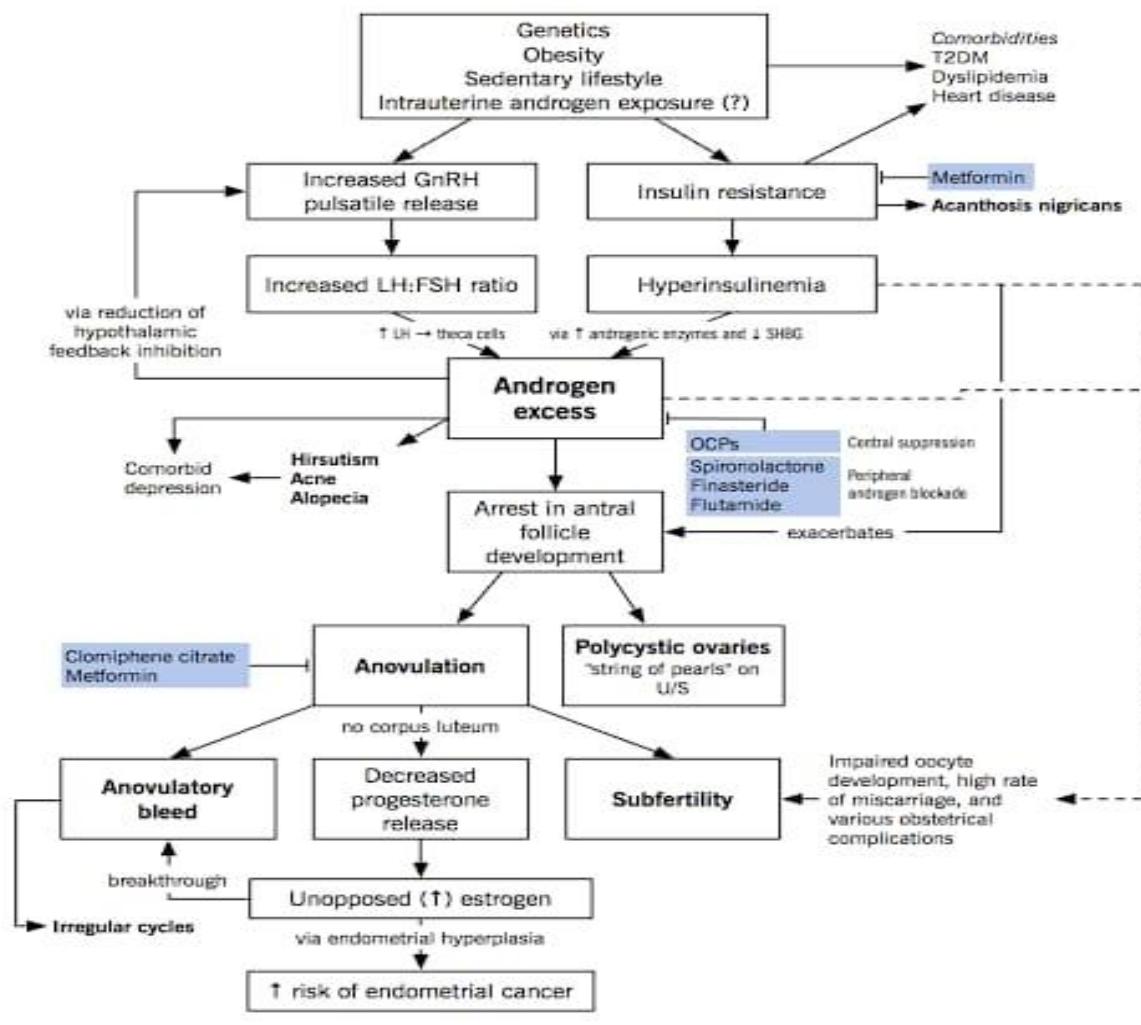


Fig.No.3: Pathology of PCOS

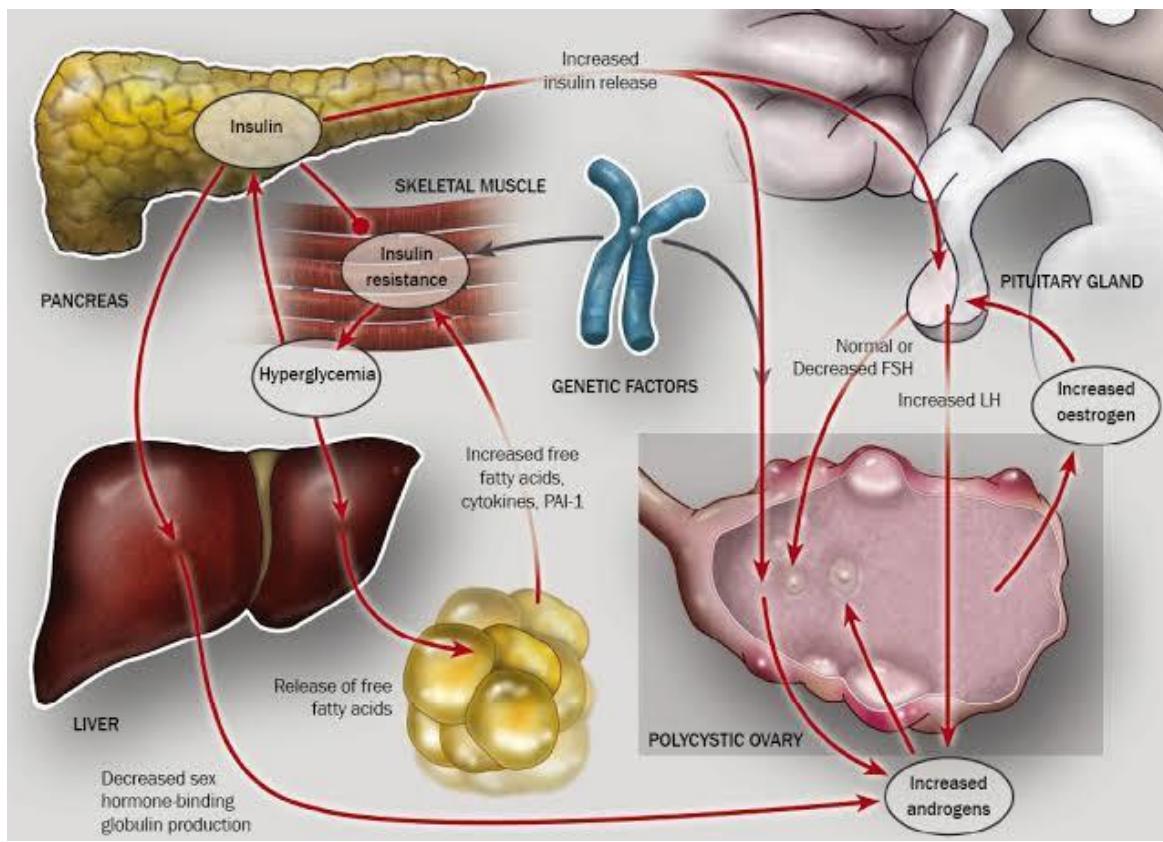


Fig.No.4: Pathogenesis

Polycystic ovaries develop then the ovaries area unit stimulated to provide excessive amounts of sex hormone hormones, specially androgenic hormone, by either one or a mixture of the subsequent (almost actually combined with generic susceptibility):

- The unharness of excessive gonadotrophin (LH) by the anterior pituitary {gland|adenohypophysis|endocrine gland|endocrine|ductless gland} gland
- Through high levels of endocrine within the blood (hyper endocrine anemia) in girls Whose ovaries area unit sensitive to the present stimulation

The syndrome noninheritable its most generally used name because of the common sign up ultrasound examination of multiple (poly) female internal reproductive organ cysts. These "cysts" are actually immature follicles now cysts. The follicles have developed from primal follicles, bow the event has stopped ("arrested") at Associate in Nursing early anural swage due to the disturbed female internal reproductive organ operate. The

follicles might be oriented on the female internal reproductive organ outer boundary, showing as a 'swing of pearls' on ultrasound examination.

Women with PCOS expertise Associate in Nursing accrued frequency of neural structure Girth pulses, that in worn ends up in a rise within the LH/FSH quantitative relation.

A majority of ladies with PCOS have endocrine resistance and/or area unit rotund. Their elevated endocrine levels contribute to or cause the abnormalities seen within the hypothalamic-pituitary-ovarian axis that lead to PCOS. Hyperinsulinemia will increase GnRH pulse frequency, luteinizing hormone over gonadotrophin dominance, accrued female internal reproductive organ steroid hormone production, decrease cyst maturation, and slashed SHBG binding. what is more, excessive endocrine, caving through hits cognate receptor within the presence of element campsignaling, up regulates 17 α -hydroxylase activity via PI3K, 17 α -hydroxylaseactivity being to blame for synthesizing steroid hormone precursors. The combined effects of hyper endocrine emia contribute to Associate in Nursing accrued risk of PCOS. endocrine resistance may be a common finding among girls With a traditional Weight yet as overweight girls.

Adipose tissue possesses aromatase, Associate in Nursing catalyst that convert androstenedione and testosterone to estrogen. The excess of animal tissue in rotund girls creates the contradiction of getting both excess androgens (Which area unit to blame for hirsuteness and civilization) and estrogens (Which inhibits gonadotrophin via negative feedback).

PCOS could also be related to chronic inflammation, with many investigators correlating inflammatory mediators within organic process and different PCOS symptoms. Similarly, there appears to be a relation between PCOS and accrued level of oxidative stress.

It has antecedently been suggested that the excessive steroid hormone production in PCOS may well be caused by a slashed liquid body substance level of IGFBP-1, in worn increasing the amount of free IGF-I, which simulates female internal reproductive organ steroid hormone production, however recent information concludes this mechanism to be unlikely.

PCOS has additionally been related to a selected FMR1 sub-genotype. The analysis suggests that Women with heterozygous-normal/low FMR1 have polycystic-like symptoms of excessive follicle-activity and active female internal reproductive organ operate.

Transgender men on androgenic hormone might expertise the next when expected rate of PCOS due to accrued androgenic hormone.

CHAPTER 4

DIAGNOSIS AND TREATMENT

Higher sex hormone levels, cysts within the ovaries and irregular catamenial cycles; have 2 out of those wherever is enough for diagnosing. connected symptoms like excess hair or skin condition and being overweight may also be factored in. A girdle examination will reveal any issues within the ovaries. Blood tests will facilitate reveal higher male hormones within the body in conjunction with cholesterin, hypoglycemic agent and triglycerides that might cause here problems or stroke. AN ultrasound are often accustomed defect abnormal follicles or alternative issues within the ovaries.

Wreathen: being work and healthy is that the initial sweep in conjunction with a balanced healthy diet. alternative options:

Birth Control: having sex hormone and progestogen within the sort of pills, patches or channel rings will rebalance endocrine levels and relieve symptoms.

Metformin: is employed for kind two polygenic disorder treatment will facilitate remedy hypoglycemic agent levels and management PCOD. as well as a diet and healthy Weight maintenance these will Turk Well.

Clomiphene: a drug that helps in obtaining pregnant tho' it will result in win or multiple births.

Hair removal pills or treatment will facilitate eighth excessive unwanted Weight.

Surgery: sex gland drilling is that the method throughwhich, little holes area unit created within the ovary employing a optical device or whiney heated needle: This helps facilitate and restore traditional biological process.

Diagnosis tool for Polycystic sex gland Syndrome

NICHD/NIH Criteria (1990) ESHRE/ASRM metropolis Criteria (2003) Androgen Excess Society (AES) Criteria (2006)

- Hyperandrogenism
 - Hyperandrogenism
 - Hyperandrogenism

- Oligo-ovulation/an biological process
 - Oligo-ovulation/anovulation
 - Oligo-ovulation/anovulation
- Exclusion of alternative connected disorders • Polycystic ovaries • Polycystic ovaries
 - Exclusion of alternative connected disorders

Modified from criteria of the National Institute of kid Health and Human Development (NICHD) /National Institutes of Health (NIH)/ European Society of Human replica and biology (ESHRE)/ yank Society for fruitful drugs (ASRM).

Fig.No.5: diagnosing tool for polycystic sex gland syndrome

TREATMENT IN medical aid

The medical treatment of PCOD/PCOS focuses on managing your individual issues, like physiological state, hirsutism, skin condition or fat.

- Lowering of blood sugar levels
- Restoration of fertility
- Wreathen of hirsuteness or skin condition
- Restoration of normal expelling, and bar of mucosa dysplasia and carcinoma

Losing Weight (Which will bedifficult) has been shownto facilitate withdiabetes, high pressure level, and high cholesterin. Even a Weight loss of fifty of towel weight has been shownto facilitate withthe imbalance of hormones and conjointly withinfertility.

An biological process

□ Clomiphene.

The drug of selection for causing biological process in PCOS is clomiphene citrate (Clomid, Sanofi), although the precise mechanism of action is unknown. Initially, a dose of fifty mg/day for five days is given. If biological process happens but no maternity results, fifty mg/day for five days is sustained for the subsequent cycles. However, if biological process will currently occur after the first cycle, the dose could also be exaggerated to one hundred mg daily for five days at least thirty days after the previous course of medical aid.

Further treatment is currently sometimes suggested after where courses of therapy; but, up to 6 cycles could be attempted before any medical aid is taken into account. Clomiphene results in triple-crown pregnancies roughly half-hour of the wine; but, two hundredth of those pregnancies end in spontaneous abortions or stillbirths. Adverse effects could embody sex gland enlargement; sex gland hyperstimulation syndrome (OHSS); multiple pregnancies; however flashes; and canal (GI) dissension, bloating, and discomfort.

□ Antidiabetic agents

Other medications could also be accessory to clomiphene to yield a additional favorable outcome for biological process. antidiabetic drug medicine are often accustomed improve fertility, decrease hypoglycemic agent resistance, and cut back current sex hormone levels.

More knowledge area unit on the market for Glucophage (Glucophage, Bristol-Myers Squibb) once for the thiazolidinediones in wreathing PCOS. The role of Glucophage for the treatment of physiological state with PCOS Was compared with placebo during a study that enrolled 320 girls. After three months of treatment with no ensuing pregnancies, AN appropriate in fertility treatment was allowed to be accessory to the program for either cluster. Metformin, compared with placebo, was associated with significantly higher maternity rates (53.6% vs. 40.4%, respectively) and live birth rates (41.9% vs. 28.8%; respectively; P = zero.014) compared with placebo. However, during a new-analysis in which the efficacy of metformin was evaluated in up reproductive outcomes for Women with PCOS, there was no proof of improved rates of live births with metformin alone or together with fertility drug.

A Clomiphene/metformin combination could be wired if individual therapies fail; but evidence of improved results is restricted. fertility drug alone or together with metformin was compared with Metformin alone during a randomised, double-blind trial. The fertility drug arm ($n = 209$) received fifty mg daily for five days starting on day three of menses; this dose was with rated by fifty mg per cycle up to one hundred fifty mg. The metformin dose ($n = 208$) was with rated up to one,000 mg doubly daily, or a mixture of both regimens Was given ($n = 209$). Rates of live births were twenty two.5% within the fertility drug cluster, 7.2% in the Metformin cluster, and 26.8% within the combination teams. In all, rates of live birth rates were considerably higher within the combination and fertility drug arms once in the Metformin arm. Other Therapies

❖ **Medroxyprogesterone acetate.**

In a dose programme of five to ten mg/day for ten to fourteen days every month, Provera acetate (MPA) will be accustomed wreath amenorrhoea or dysfunctional female internal reproductive organ hurt in ladies with PCOS

World Health Organization do currently want to conceive and World Health Organization square measure nowat risk for maternity. Monthly progesterone medical care obviates abnormal mucosa proliferation bow will currently suppress female internal reproductive organ steroid production. MPA may improve internal secretion sensitivity and supermolecule profiles in patients with PCOS.

□ Satins.

Statins square measure thought-about to own an area within the treatment of PCOS thanks to their ability to scale back androgenic hormone levels, moreover as low-densitylipoprotein-cholesterol (LDL-C), triglycerides, and total cholesterol. during a comparison of lipid-lowering medication (Zocor, Merck) and antidiabetic drug in ladies with PCOS, total androgenic hormone levels were reduced by seventeen.1% and 13.6%, severally. lipid-lowering medication had a superior impact compared with antidiabetic drug alone but the combination was currently found to be superior to lipid-lowering medication alone, at 15.1%.

TREATMENT IN writing

PCOS wants early designation and semipermanent management for avoiding long run complications. PCOS treatment in writing recommends Virechana (Detoxification), Nasya, Shirodhara and uttarbasti for PCOD on withDie and way modification. Shathayu writing contains a terribly systematic approach in treating the disease; we tend to set up a tailor-made treatment for every individual that is particular to their symptoms.

- Weight loss in PCOD – Loosing simply 5-10% of the weight helps to develop regular discharge cycles.
- Restoration of standard emission – by wreatheingscanty blood loss, once mucous membrane
- Restoration of fertility – that specialize in regular organic process and AMH levels
- Wreatheen of hairiness, hair fall & skin problem – therapies to combat skin and hair problems
- Leering of blood serum internal secretion levels – restoring traditional secretion levels

Although Ayurvedic treatment of PCOS could vary among practitioners, it often involves the utilization of specific herbs, primarily to maintain a balance of hormones. These include:

- Ashwagandha. Ashwagandha is associate degree herb that's additionally referred to as Indian ginseng or Winter cherry. It will facilitate balance cortisol levels to improve stress and PCOS symptoms, consistent with a 2016 study trustworthy supply of fifty two individuals below chronic stress.
- Cinnamon. Cinnamon, harvested from the bark of the cinnamon tree, is more when just a spice employed in baked goods: consistent with a little 2007 study, it will positively affect internal secretion resistance

parameters in PCOS. A 2014 study supply of forty five ladies indicated that cinnamon could play a job in control discharge cycles for ladies with PCOS.

- Turmeric. Turmeric gets its yellow color from its active ingredient, curcumin. During a 2017 study trusted supply on PCOS-induced rats, curcumin showed promise as an associate degree medicinal drug agent and as some way to decrease internal secretion resistance.

AYURVEDIC THERAPIES FOR PCOS

A 2012 study indicated that a 12-Week yoga program helped reduce anxiety symptoms in adolescent women with PCOS.

An Ayurvedic professional person could suggest yoga poses, additionally referred to as posture, such as:

- Reclining Butterfly pose (SupwaBaddhaKonasana)
- Bharadvaja's twist (Bharadvajasana)
- Mill Churning pose (ChakkiChalanasana)
- Corpse pose (Shavasana)

Your professional person may suggest meditation and respiration exercises, called pranayamas to assist relieve stress.

AYURVEDIC DIET FOR PCOS

The dietary practices an Ayurvedic professional person recommends for PCOS can typically be similar to those that your medical care doctor might suggest, including:

- eating fewer saturated fats (like white meat and cooked foods)
- reducing your salt intake
- eating more fruits, vegetables, and whole grains
- avoiding sweetener, honeyed foods, and artificial sweeteners

AYURVEDIC TREATMENT FOR PCOS SUBFERTILITY

Subfertility is once you're retrying to induce pregnant but experience a delay in conceiving. It will be a symbol of PCOS.

Some clinical analysis has targeted on the Ayurvedic treatment of sub fertility.

A 2017 study trusted supply of fifteen individuals with PCOS, for instance, checked out Vamana fate (therapeutic vomiting), along side the administration of Yoga-IkshWaaku seed powder followed by ShatapushpadiGhanavati (a combined formulation). Researchers determined that this method could be effective in increasing the probabilities of conception for PCOS patients. According to a 2010 study trusted Source Pub Med Central Highly revered info from the National Institutes of Health move to source of forty people experiencing sub fertility, PCOS-caused sub fertility will be resolved with a 6-month program of:

- Shodhana (detoxification and purification procedures)
- Shamana (palliative treatments to scale back discomfort and relieve symptoms)
- Warpana (offering created to divine enmities)

CHAPTER 4

COMAPARISON BEWEEEN AYURVEDIC AND ALLOPATHY TREATMENT ON PCOD

ALLOPATHY TREATMENT	AYURVEDIC TREATMENT
Allopathy concentrates on maintaining the hormone balance. Hence, allopath prescribes hormone treatment and sugar control medicines for PCOS.	Ayurvedic treatment for PCOS will remove the issue from its roots. Thereby, preventing recurrence of the problem.
Inositol (in any form) should currently be considered an experimental therapy in PCOS	Therapies, such as yoga and breathing exercises.
Medications for PCOS include oral contraceptives and metformin.	Choose Whole grains, which contain all parts of the grain
Metformin is a medication commonly used in type 2 diabetes mellitus to reduce insulin resistance, and is used off label (in the UK, US, AU and EU) to treat	Lifestyle, such as increasing consumption of fruits, vegetables, and Whole grains

insulin resistance seen in PCOS.	while reducing consumption of saturated fats, salt, and refined sugar.
Medications to induce fertility then wring to conceive include the ovulation inducer clomiphene or palatal leuprorelin.	Increase the consumption of fruit & vegetables.
Spironolactone can be used for its antiandrogenic effects, and the topical cream eflornithine can be used to reduce facial hair.	Herbs, such as ashwagandha and turmeric.
In any case, androgens, such as testosterone, androstanolone (dihydrotestosterone), and nandrolone deconate have been found to increase visceral fat deposition in both female animals and women.	PCOS treatment in Ayurveda recommends Virechana (Detoxification), Nasya, Shirodhara and wwwarbaswi for PCOD along with Diet and life style modification.

CHAPTER 5

CHALLENGES

The long-term risks observed in women with PCOS are now the same in all PCOS patients but they vary according to different phenotypes and results were negatively affected by obesity and lifestyle factors. When Rotterdam criteria are applied, almost uniformly accepted by the main scientific societies, the prevalence of PCOS in the population increases to over 20%. With a large majority, approximately 75%, of referred PCOS women having "classic" PCOS (according to NIH criteria) and the remaining 25% equally divided between adulterous and non-hyper androgenic PCOS phenotypes. Several studies suggest that women with PCOS, based on the classic-NIH criteria, exhibit a more detrimental metabolic and cardiovascular profile compared to milder phenotypes. In line with these considerations, the main scientific societies dealing with PCOS have recently proposed guidelines and consensus statements, suggesting a correct diagnostic approach to PCOS patients and an effort to properly identify the phenotype of each patient, with the aim toward specific treatments and to prevent these severe long-term risks.

At present, in overweight/obese PCOS Women, we advise lifestyle changes (consisting of Mediterranean diet and physical activity) as preliminary approach, at any age, with the aim of Weight loss. We suggest the association with metformin in obese/overweight PCOS patients then lifestyle program alone is not enough to obtain metabolic improvements and we proposed metformin use in lean PCOS patients with impaired insulin sensitivity.

CHAPTER 6

CONCLUSION

Polycystic ovarian syndrome (PCOS) as a complex neuroendocrine metabolic disorder associated with insulin resistance and obesity. It is associated with menstrual disturbance and altered hormonal parameter.

The etiology of disease is still unknown but recent studies show that the principle underlying the disease condition is insulin resistance which results into hyperinsulinemia that stimulates excess ovarian androgen production.

In clinical gynecologic practice, women with PCOS are seen primarily for menstrual irregularity, androgen excess and infertility treatment is required as soon as the disorder has been diagnosed.

PCOS appear to be associated with an increased risk of metabolic aberration, including insulin resistance and hyperinsulinism, type II diabetes mellitus, dyslipidaemia, cardiovascular disease and endometrial carcinoma.

Studies of women undergoing coronary angiography for evaluation of chest pain found a disproportionately large number with polycystic ovarian on ultrasound scan.

In our study as regards the prevalence of metabolic syndrome among obese PCOS patients was 45% compared to 15% among obese control group and was among 40% among non-obese PCOS compared to 5% among non-obese control group.

In conclusion we observed that metabolic syndrome is more prevalent among PCOS patients nearly these folds, which makes them at higher risk for development of cardiovascular disease, type II diabetes, hypertension & other metabolic disorders.

So, we suggest that assessment of metabolic syndrome should be carried out in all PCOS patients especially obese subjects.

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