



## POLYCYSTIC OVARIES SYNDROME AND ITS EFFECT ON FERTILITY

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### ABSTRACT

Polycystic ovaries syndrome is a common ovarian syndrome e cause by the increased level of androgens in females. Great efforts have been made to define the syndrome and its phenotypic heterogeneity. In addition there is a effect of metabolic issues, obesity, insulin resistance not only to the pathogenicity of pcos but may be a major factor leading to pcos. This report emphasizes on the effect of pcos on fertility in female population. A questionnaire based study was carried out in the gynecology out patients department on the ladies effecting from infertility due to pcos The objective of study was.

- To ensure medication according to symptoms.
- To study the effect of PCOS on fertility.

The medications given to patients depends on the symptoms associated with the disease i.e hormones(progesterone), metformin(obesity). Clomiphene(increase ovulation). The side effects of these medications are rare. Life style changes especially weight loss plays a major role not only in hormones balancing but also in overcoming infertility issues.

**INDEX TERMS:** Pcos(polycystic ovaries syndrome), obesity, fertility, clomiphene, androgens.

### 1. INTRODUCTION

(Lord J.M flights<sup>[1]</sup> shows) Polycystic ovaries contain a large number of harmless cysts up to 8mm in size. The cysts are under-developed sacs in which eggs develop. Often in PCOS, these sacs are unable to release an egg, meaning ovulation doesn't take place.

Polycystic ovary syndrome (PCOS) is a health problem that can affect a woman's: menstrual cycle, ability to have children, hormones, heart, blood vessels, appearance. (Wang J. X<sup>[2]</sup> shows) With PCOS, women typically have.

- High levels of androgens. These are sometimes called male hormones, though females also make them.
- Missed or irregular periods (monthly bleeding)
- Many small cysts (fluid-filled sacs) in their ovaries.

A main underlying problem with PCOS is a hormonal imbalance. In women with PCOS, the ovaries make more androgens than normal. Androgens are male hormones that females also make. High levels of these hormones affect the development and release of eggs during ovulation (M.Hudecoval<sup>[3]</sup>) Researchers also think insulin may be linked to PCOS. Insulin is a hormone that controls the change of sugar, starches, and other food into energy for the body to use or store. Many women with PCOS have too much insulin in their bodies because

they have problems using it. Excess insulin appears to increase production of androgen. High androgen levels can lead to acne, excessive hair growth, weight gain, problems with ovulation. Infertility is most commonly caused by problems with ovulation (the monthly release of an egg). Some problems stop women releasing eggs at all and some cause an egg to be released during some cycles, but not others. PCOS a condition that makes it more difficult for ovaries to produce an egg.

The side effects of some types of medication and drugs can affect your fertility. These medicines are outlined below.

- Non-steroidal anti-inflammatory drugs (NSAIDs): Long-term use or a high dosage of NSAIDs, such as ibuprofen or aspirin, can make it more difficult for you to conceive.
- Chemotherapy : Medicines used for chemotherapy (a treatment for cancer) can sometimes cause ovarian failure, which means your ovaries will no longer be able to function properly. Ovarian failure can be permanent.
- Neuroleptic medicines: Neuroleptic medicines are antipsychotic medicines often used to treat psychosis. They can sometimes cause missed periods or infertility.
- Spironolactone: This is a type of medicine used to treat fluid retention (oedema). Fertility should

recover around two months after you stop taking spironolactone.<sup>[4]</sup>

Illegal drugs such as marijuana and cocaine can seriously affect fertility, making ovulation (the monthly cycle where an egg is released from the ovaries) more difficult (Donald.D<sup>[4]</sup>) Factors that affect fertility: There are many factors that can affect fertility. These are outlined below.

Weight, being overweight or obese reduces both male and female fertility. In women, being overweight can affect ovulation. Being underweight can also have an impact on fertility, particularly for women, who will not ovulate if they are severely underweight.

Sexually transmitted infections (STIs), there are several STIs that can cause infertility. For example: chlamydia can damage the fallopian tubes in women and cause swelling and tenderness of the scrotum (the pouch containing the testes) in men.

Smoking, As well as affecting your general and long-term health, smoking can also adversely affect fertility. Read more information about quitting smoking.

Occupational and environmental factors: Exposure to certain pesticides, metals and solvents can affect fertility in both men and women.

Stress, if either you or your partner is stressed, it may affect your relationship. Stress can contribute to a loss of libido (sex drive), which in turn can reduce the frequency of sexual intercourse. Severe stress may also affect female ovulation and limit sperm production.

Treatment options include

- Clomiphene (KLOHM-uh-feen) (Clomid, Serophene) — the first choice therapy to stimulate ovulation for most patients.
- Metformin taken with clomiphene — may be tried if clomiphene alone fails. The combination may help women with PCOS ovulate on lower doses of medication.
- Gonadotropins (goe-NAD-oh-troe-pins) — given as shots, but are more expensive and raise the risk of multiple births compared to clomiphene.<sup>[4][5]</sup>

Another option is in vitro fertilization (IVF). IVF offers the best chance of becoming pregnant in any given cycle. It also gives doctors better control over the chance of multiple births. But, IVF is very costly.

**2. METHODOLOGY**

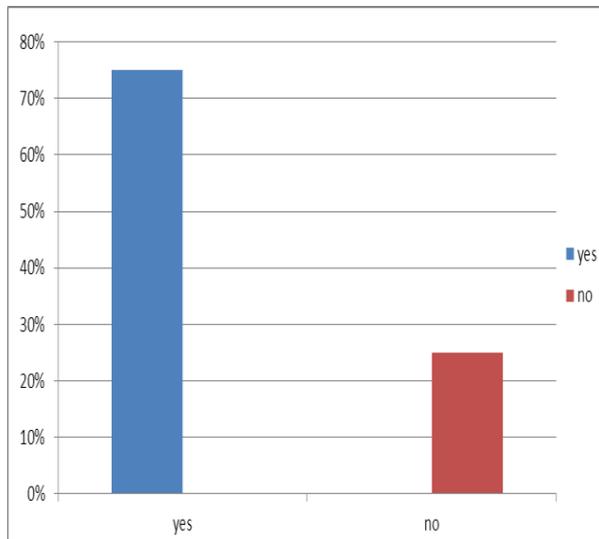
An observational and questionnaire based survey was conducted about the management of PCOS and its effect on fertility. Random cluster sampling technique was adopted for the study. It included married female of all age group suffering from polycystic ovarian syndrome (PCOS). The study was carried out for 2 months (dated July 2015- August 2015). A data collection form was

designed and was filled during face to face interview with the patients and health care providers. The data collected was computed and results were interpreted in the form of graphs.

**3. RESULTS**

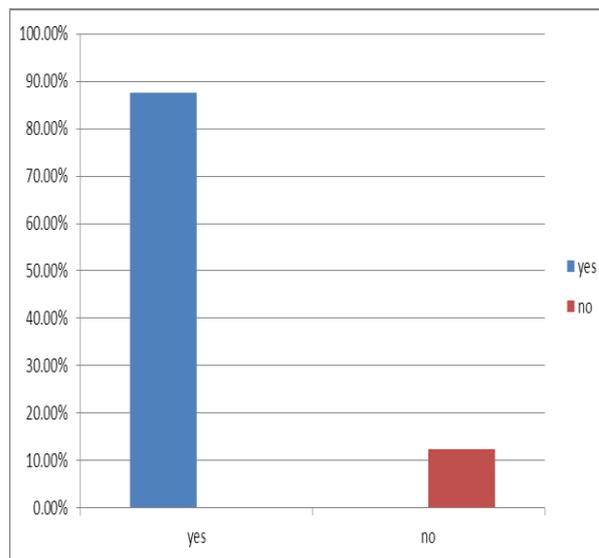
**3.1: disease before marriage.**

Yes	No
75%	25%



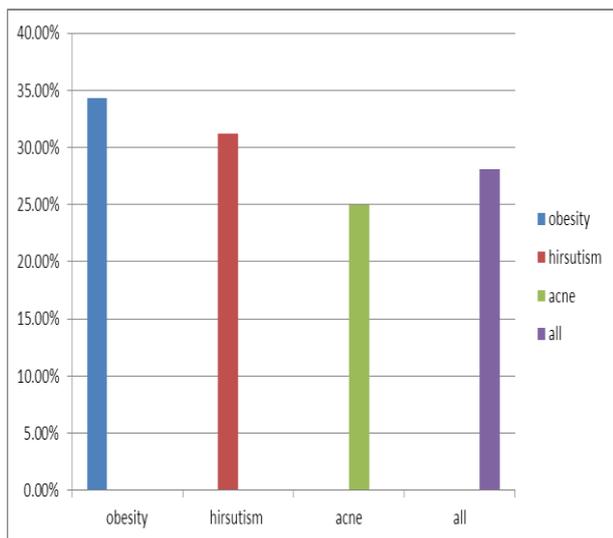
**3.2: Menstrual irregularities**

Yes	No
87.5%	12.5%



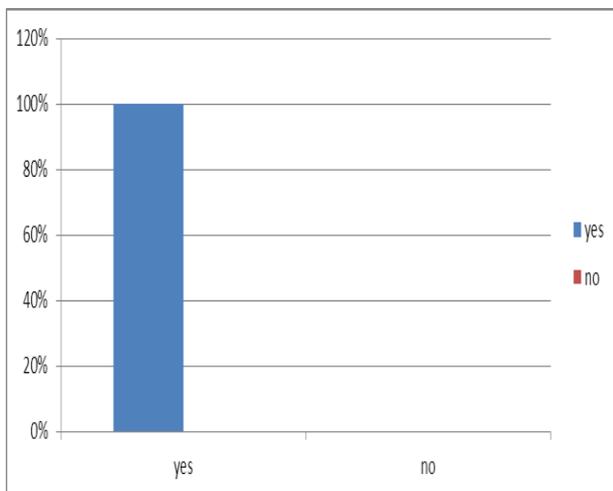
**3.3: symptoms**

Obesity	Hirsutism	Acne	All
34.3%	31.2%	25%	28.125%



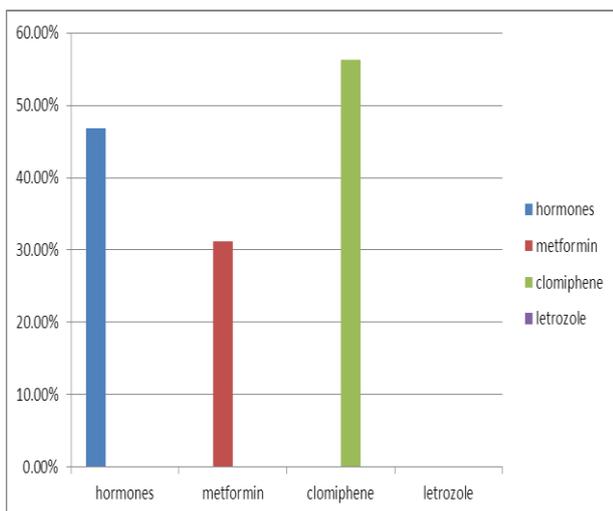
**3.4:ultrasound as diagnostic tool**

Yes	No
100%	0%



**3.5:medicatiois**

Hormones	Metformin	Clomiphene	Letrozole
46.8%	31.25%	56.25%	0



**4. DISCUSSION**

Poly cystic ovaries is quite an issue today in the females of Pakistan and is a cause of infertility to some extent. A survey was conducted on the” management of polycystic ovarian syndrome and its effect on fertility “. This disease is of all ages, ovaries can develop cyst when ever in life any women have a hormonal imbalance due to certain reasons as Pcos is not really affected by the marriage and it is purely hormones dependent. During pcos majority of the women experience irregularity in their monthly cycle and only few are asymptomatic, and had regular periods. Major symptoms associated with pcos are obesity, hirsutism, acne. A person may have any of these or may be all at a time. The ratio of symptoms associated with pcos is almost the same but obesity was observed more commonly in women with the disease. During the study it was observed that all the women had a ultrasound and the ratio was very high. Mostly doctors prefer ultrasound in pcos to have a clear view of the ovaries and the amount of cyst and immature follicles present.

The medication that was prescribed by the doctor mostly follows the same trend. Hormones (esterdiol+progetrone) was given highly to women to regulate their menstrual cycle but to ovulate regular cycle is not quite necessary. With hormones metformin is the other drug used in PCOS that reduce insulin resistance of the body and decrease glucose tolerance in body that help the hormones to work properly. Clomiphene is one of the most frequently used medication that help to induce ovulation in case of infertility and may produce 2-3 eggs at a time and it really helpful for women to conceive.

These medication have mild side effect like headache or nauses.mostly women do not feel any side effect because they are very minor but some women experience these side effects but their ratio is very low. In PCOS obesity is one of the major problem that may cause the body glucose tolerant and severe the disease. So with the medication doctor also suggest life style change and exercise to manage pcos, which is very helpful in the women with high body to mass ratio.

PCOS women do not have a frequent abortion. They may conceive lately but do not had an abortion mostly. The abortion may be due to other complication like hypertension etc. It was observed that medication was taken regularly without any great lapse. Mostly patient do not miss their medication or try to do so, only a small number was careless about their pills.

- Prescriber mostly suggest medication depending upon the symptoms of the patients
- Mostly all the test i.e ultrasound, glucose level androgen levels are performed time to time
- The medications used for fertility are effective but mostly depends on the age of the women who conceive

## 5. ACKNOWLEDGEMENT

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