PCOS AND FATTY LIVER DISEASE

Polycystic ovary syndrome (PCOS) is a common hormonal disorder that affects how the ovaries work, often causing irregular periods, excess androgen levels, and ovarian cysts. It often leads to insulin resistance, obesity, and metabolic syndrome and greatly increases the risk of fatty liver disease.

PCOS AFFECTS 10% OF ALL WOMEN AND UP TO 13% OF HISPANIC WOMEN

HOW IS PCOS DIAGOSED?

PCOS is diagnosed based on symptoms, hormone levels, and/or ultrasound findings. Most often, two out of these identifiers are present.

1. **Irregular or absent ovulation**
   This includes missed, infrequent, or unpredictable menstrual periods.
2. **Elevated androgen levels**
   Either through blood tests or physical signs like excess facial/body hair, acne, or hair thinning.
3. **Polycystic ovaries on ultrasound**
   Ovaries may show multiple small follicles that haven't matured properly.

Blood work includes glucose tolerance tests and HOMA-IR to evaluate insulin resistance, as well as hormone testing for testosterone and androgens. estrogen, thyroid levels, and LH; additional levels of other hormones may be checked.

Primary care doctors are typically the first to suspect PCOS and refer to gynecologists, endocrinologists, or infertility experts.

WHAT ARE THE SYMPTOMS OF PCOS?

- *Irregular Periods*
- *Excess Androgen resulting in facial hair, acne, male patterned baldness*
- *Difficulty Conceiving*
- *Over 50% have weight issues*
- *Fatigue*
- *Mood Swings*

WHAT CAUSES PCOS?

PCOS is a complex condition primarily caused by a combination of genetic and hormonal factors, including insulin resistance and elevated levels of androgens (male hormones). These imbalances disrupt normal ovarian functions, leading to irregular menstrual cycles, cyst formation, and other metabolic symptoms. A high number (55-80%) of women with PCOS have elevated insulin levels.

HEALTH RISKS

- Studies show a 4 times increased likelihood for fatty liver disease
- Risk of cardiac arrest 6-7 times more likely
- Over 50% of women diagnosed with diabetes before age 40
- Infertility
- Endometrial cancer

TREATMENTS

- There are no FDA approved treatments
- Metformin helps lower blood glucose, improves insulin resistance and reduces liver inflammation and fat buildup
- Healthier diet choices and increased activity

Early intervention and screening are the most important tools in helping to prevent progression to advanced liver disease. Healthcare professionals should be screening for liver disease and diabetes on a routine basis. It is vital in the diagnosis of fatty liver disease that a care team compromising of both an endocrinologist and hepatologist are involved.

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