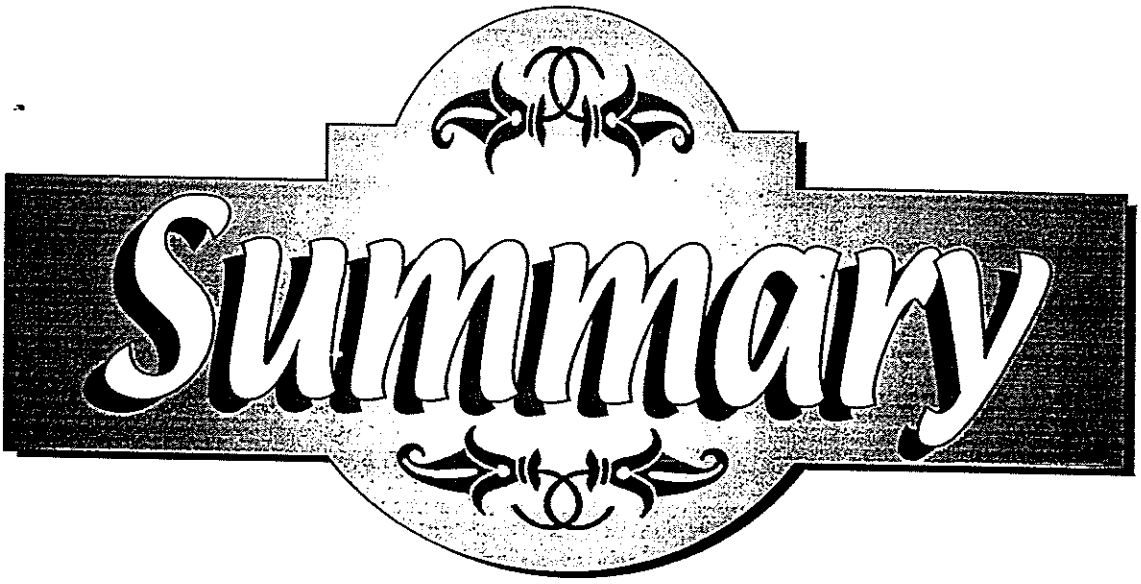
Summary

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The incidence of PCOS is approximately 1 in 12 women of reproductive age.

In a study of 173 symptomatic women, the ultrasonographic appearance of polycystic ovaries was found in 92% of women with hirsutism with regular menstrual cycles, 87% of women with oligomenorrhea, 57% of anovulatory women and 26% of women with amenorrhoea.

Polycystic ovary syndrome (PCOS) is a heterogeneous syndrome characterized by persistent anovulation, oligomenorrhea or amenorrhea and hyperandrogenism in the absence of thyroid, pituitary, or adrenal disease and is the most common cause of anovulation in adult women.

The definition of polycystic ovary syndrome (PCOS) varies markedly among investigators, some use clinical criteria that may include anovulation, obesity, hirsutism and insulin resistance.

Medical induction of ovulation in anovulator women with PCOS who fail to respond to clomiphene citrate may become complicated, as this involves parentral administration of gonadotrophins, either human menopausal gonadotrophins (HMG) or pure follicle stimulating hormone (FSH) with or

without pituitary down regulation with (GnRH) analogue. However, these medications are relatively expensive, require extensive monitoring, and are associated with a significant risk of multiple pregnancy and ovarian hyperstimulation syndrome.

Genetic Considerations :

The familial clustering of hyperandrogenemia, anovulation, and polycystic ovaries suggests an underlying genetic basis.

Insulin Resistance, Hyperinsulinemia and Hyperandrogenism :

The association between increased insulin resistance and polycystic ovaries is now well recognized.

Obesity recently is one of the most common causes of the PCO.

Induction of Ovulation with Clomiphene Citrate :

Clomiphene citrate was first synthesized in 1960, and approved for clinical use in the United States in 1967. In early clinical trials, 80% of anovulatory women treated with clomiphene achieved ovulation and half of those who ovulated also conceived. The collected clinical experience gained in the years since remains consistent with those early observations.

Extended-Course Clomiphene Treatment :

Up to 50% of clomiphene resistant anovulatory women who don't respond to a standard 5-day treatment regimen (150 mg daily) may ovulate after longer durations of clomiphene treatment (7-10 days).

Clomiphene and glucocorticoids.

Clomiphene and HCG.

Metformin : Overall, 70-90% of anovulatory women with polycystic ovary syndrome treated with metformin ovulate spontaneously or after addition of clomiphene.

Induction of Ovulation with Exogenous Gonadotropins :

Recombinant FSH preparations contain less acidic FSH isoforms that have a shorter half-life than those derived from human urine but stimulate estrogen secretion as or even more efficiency*(Filicori, 2003)*. The advantages of recombinant FSH preparations include the absence of urinary protein, more consistent supply, and less batch to batch variation in biologic activity.

Exogenous GnRH Treatment Regimens :

Exogenous GnRH is most effective when administered intravenously in low doses (2.5-5.0 μg/pulse) at a constant interval (every 60-90 min). Those who fail to ovulate may respond to a higher dose (10-20 μg).

Induction of Ovulation with Dopamine Agonists :

Serum concentrations of bromocriptine peak 1-3 hours after an oral dose of bromocriptine and very little remains in the circulation 14 hours after administration; an oral dose of 2.5 mg generally lowers prolactin concentrations for up to 12 hours.

Spironolactone :

Spironolactone is an aldosterone antagonist diuretic. In the treatment of hirsutism, spironolactone has multiple actions, inhibiting the ovarian and adrenal biosynthesis of androgens, competing for the androgen receptor in the hair follicle, and directly inhibiting 5a-reductase activity.

Cyproterone Acetate :

Cyproterone is a potent progestational agent that both inhibits gonadotropin secretion and blocks androgen action by binding to the androgen receptor.

Treatment with GnRH Agonists :

A greater dose of GnRH agonist is required to suppress ovarian androgen secretion compared with estradiol secretion.

Eflornithine Hydrochloride (Vaniqa):

Eflornithine hydrochloride 13.9% cream inhibits ornithine decarboxylase. Clinical trials have documented that twice daily application of a topical cream produces improvement within a few weeks in 60% of women with facial hair.