
Introduction
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Aim of the Essay

Introduction

Polycystic ovaries were first recognized at the beginning of the last century. It was first brought to the attention medical profession in 1935 by Stein and Leventhal who reported a series of seven patients with bilateral polycystic ovaries and a thickened ovarian cortex (seen at laparotomy) and the clinical features of amenorrhea, hirsutism and infertility ***(Ashton, 1996).***

The use of different diagnostic criteria for PCOS have undermined attempts to derive an accurate, population-based prevalence for this condition. The incidental finding of Polycystic ovaries at the time of ultrasound examination is relatively frequent, occurring in up to 33% of women ***(Michelmore and Vessey, 1999),*** although most studies report an incidence around 22% in an unselected population ***(Asuncion et al., 2000).***

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 ***(Adams and Franks, 1986).*** Interestingly, of those women with the sonographic appearance consistent with polycystic ovaries, up to 25% will be asymptomatic. A further study of women who had regular menstrual cycles but were anovulatory demonstrated

polycystic ovaries in 91% of cases *(Carmina and Lobo, 1999)*.

Prevalence of the polycystic ovary syndrome in unselected black and white women of the southeastern United States. ***Knochenhazler et al. (1998)*** estimated that 6.2% of 129 white and 3.4% of 145 black women attending for a mandatory pre-employment medical examination had PCOS. The incidence of PCOS is approximately 1 in 12 women of reproductive age.

PCOS is also known to be associated with a markedly higher incidence of diabetes mellitus, dyslipidemia hypertension, myocardial infarction, atherosclerosis and other cardiovascular diseases.

Polycystic ovary syndrome (PCOS) is a heterogeneous syndrome characterized by persistent anovulation, oligo-menorrhea 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. Sonographic visualization of polycystic ovaries ***(El-Tabbakh et al., 1986)***. Others use laboratory criteria that may include elevated serum LH levels, elevated circulating androgens and increased LH:FSH ratio *(Devane*

et al., 1975 and Yen, 1980). Although most investigators use a combination of clinical and laboratory criteria, there is no consensus as to which of these criteria required before assigning the diagnosis of PCOS *(Udoff and Adasshi, 1995).* Polycystic ovary syndrome is the most common cause of anovulation *(Hull, 1987).* Classically, clomiphene citrate (C-C) is the first approach to induce ovulation in patients with PCOS. Although 70-80% of PCOS women treated with cc ovulate, only 30-40% become pregnant. However, there is a high miscarriage rate of approximately 40% and 10% risk of multiple pregnancy *(Kelly and and Adashi, 1987).* 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 *(Whelan and Vlahos, 2000).*