Polycystic Ovary Syndrome - a Complex Endocrine Disorder

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Polycystic ovary syndrome (PCOS) is the commonest reproductive endocrinopathy. PCOS must be distinguished from the presence of polycystic ovaries detected on ultrasound, but without any accompanying symptoms. PCOS is now defined as the occurrence of two out of the following features: oligo-anovulation; hyperandrogenism, and the appearance of polycystic ovaries on ultrasound. The syndrome is highly variable, but a number of endocrine features are common: hypersecretion of LH, low-normal serum levels of FSH, elevated levels of total testosterone, free testosterone, androstenedione anti-Mullerian hormone and prolactin; a high oestrone: oestradiol ratio, and decreased levels of sex hormone binding globulin and progesterone. There may be substantial alterations in the pattern of secretion and metabolism of several hormones. Many women with COS also show substantial insulin resistance and even reduced glucose tolerance. Many of these endocrine changes are interlinked through the endocrine activity of multiple small, ovarian antral follicles and adipose tissue. The endocrine changes have a major impact on symptoms, fertility, miscarriages and a series of long-term risks. The familial component of PCOS should be recognised, including the male manifestation of premature frontal balding.

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