

POLYCYSTIC OVARIAN SYNDROME (PCOS) – A CLINICAL CASE REVIEW**^{1*}Dr. Muhammad Iqbal and ²Dr. Adeel Saleem**¹MBBS. CCST (UK). MRCGP (UK). MRCPS (Glasgow). PG Dip-Diabetes- University of South Wales (UK). MRCP (UK). Consultant Family Physician-Ambulatory Health Service, UAE. Consultant GP (UK).²FRCP (EDIN), MRCGP (UK), CIDC-DIABETES (UK). GP / Consultant Family Physician and Tutor for Diabetes PG diploma (iheed and Warwick University, UK).¹ORCID ID: <https://orcid.org/0000-0002-0620-4333>²ORCID ID: <https://orcid.org/0000-0002-0452-4309>***Corresponding Author: Dr. Muhammad Iqbal**

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ABSTRACT

Polycystic Ovarian Syndrome (PCOS) is a common lifelong metabolic condition with serious associated comorbidities. PCOS is a multisystem disorder that can affect the course of a woman's life and is associated with considerable distress. This is a common metabolic-endocrine condition which affects woman after puberty. Mental health problems, like depression, anxiety, type 2 diabetes mellitus, subfertility, hirsutism, acne and cardiovascular disease may be associated with PCOS. Polycystic ovarian syndrome at times is mistaken for other diagnoses like Gastroesophageal reflux disease or Irritable bowel syndrome. Sometimes, the patient has a mis-conception that they can never be pregnant. I came across this lady with a diagnosis of PCOS. She was actually pregnant but she did not know as she and her husband were of the opinion that due to her PCOS she is unable to conceive. This was an interesting case. The woman's agenda was to get some medication for a possible IBS and reflux but the issue was something else. I would say that thorough history, examination and lateral thinking is the key to correct diagnosis and appropriate management for the patient.

KEYWORDS: PCOS-Polycystic Ovarian Syndrome. IBS- Irritable Bowel Syndrome HCG- Human Chorionic Gonadotrophin.

INTRODUCTION

Polycystic Ovarian Syndrome (PCOS) is a common hormone problem for women of childbearing age. Women with PCOS may not ovulate, have high levels of androgens, and have many small cysts on the ovaries. PCOS can cause missed or irregular menstrual periods, excess hair growth, acne, infertility, and weight gain. Women with PCOS may be at higher risk for type 2 diabetes, high blood pressure, heart problems, and endometrial cancer.

CLINICAL CASE REPORT

During my morning clinic, I saw a 31 years old woman along with her husband with complaints of reflux symptoms and abdominal 'bloating' symptoms for over 3 weeks. She did not have any history of nausea or vomiting. She only tried over the counter Gaviscon suspension with no relief. The patient was non-smoker and never experienced such symptoms in the past except intermittent symptoms suggestive of irritable bowel syndrome-IBS. She was known to have PCOS with mainly irregular periods for 5 years and was taking metformin for over 2 years. Her last menstrual period was 5 months ago, which can be normal pattern for her

as she had long delays between periods previously. She thought she had IBS 'flare up' due to previous history.

Her history was suggestive of gastroesophageal reflux. Clinical examination revealed a firm distention of abdomen (instead of gaseous distention, which is usually expected in reflux and IBS patients). I discussed the possibility of a different reason for her presentation and suspected pregnancy but the patient was not convinced. A urine pregnancy test was conducted after discussion, which turned out to be positive. I also requested blood HCG levels. I reviewed her the following day, her blood HCG levels were within pregnancy range. Antenatal care was started immediately after referral as well as folic acid was prescribed. This was a pleasant surprise for the patient and her husband.

DISCUSSION

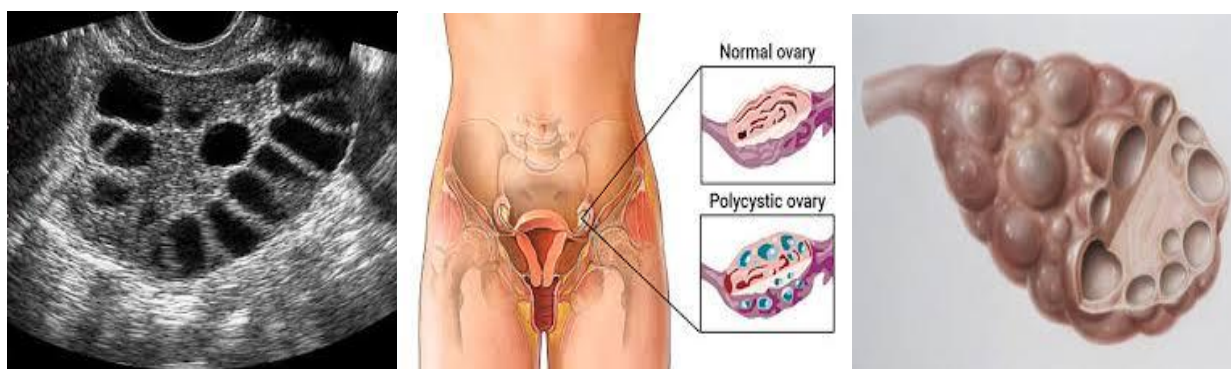
PCOS is a common condition around the world and in the UK with up to 33% of women have polycystic ovaries (i.e. 10 or more follicles per ovary detected on ultrasound). Polycystic ovarian syndrome is associated with metabolic abnormalities (abnormal serum lipid concentrations and insulin resistance) also put some

women at an increased risk of developing diabetes mellitus.

Polycystic ovarian syndrome can present with multiple clinical features which can include menstrual disturbance, oligomenorrhoea, amenorrhoea, dysfunctional uterine bleeding, anovulatory infertility, hirsutism, acne, male-pattern hair loss, acanthosis nigricans (a cutaneous marker of hyperinsulinemia)^[2] and central obesity.

Diagnosis of PCOS can be made by blood tests, which include biochemical Hyperandrogenism (Elevated Total/Free Testosterone). The endocrine abnormalities of PCOS consists of elevated luteinizing hormone with normal follicle stimulating hormone & elevated free

testosterone with reduced sex hormone binding globulin. The blood tests should be done during the first week after menstruation. Clinically patient presents with oligomenorrhea (less than 6-9 Menses per Year) or Oligo-Ovulation. In addition to that the radiological evidence of polycystic Ovaries on Ultrasound (≥ 12 Antral Follicles in One Ovary or Ovarian Volume ≥ 10 cm³) are diagnostic of PCOS. Thyroid dysfunction, congenital adrenal hyperplasia, hyperprolactinaemia, androgen-secreting tumours and Cushing's syndrome must be excluded before making a diagnosis of PCOS.^[1] A serum testosterone level of above 4.8 nmol/l requires exclusion of other causes of androgen hypersecretion such as an androgen-secreting adrenal or ovarian tumour, Cushing's syndrome or non-classical congenital adrenal hyperplasia.^[3]



Polycystic ovary
Ultrasound image.

Polycystic ovarian syndrome can result in various complications which include infertility, a 2-fold increased risk of diabetes mellitus,^[4] higher risk of gestational diabetes especially in obese women,^[1] three-fold increased risk of TIA/stroke,^[1] increased risk of development of endometrial cancer,^[4] obstructive sleep apnoea and they might complain of daytime somnolence/fatigue and snoring.^[1]

Treatment of women with PCOS should begin with lifestyle measures including weight loss.

Treatment options are clomiphene citrate, metformin, or a combination of both.^[5] If woman known to be resistant to clomiphene citrate, consider one of the following second-line treatments, depending on clinical circumstances and the woman's preference. The options include laparoscopic ovarian drilling or combined treatment with clomiphene citrate and metformin if not already offered as first-line treatment. If weight loss can be difficult to achieve, there should not be undue delay in referring a woman who is overweight for specific treatment to induce ovulation if she has failed to lose weight, particularly if she is aged over 35 years.^[6]

Menstrual irregularity can be treated with combined oral contraceptive, which can provide multiple benefits such as regular periods, increase levels of the sex hormone

binding globulin and so reduced free testosterone. Other treatment options include cyclical progestogens or a levonorgestrel-releasing intrauterine system.

The causes of PCOS are unclear, but early and timely diagnosis can help relieve symptoms and reduce the risk of complications. PCOS should be treated as chronic long term metabolic condition with regular reviews and monitoring to prevent long-term complications. The lessons learnt from this case is to explore the signs and symptoms in detail and to think 'laterally'. The case has re-emphasized the fact that there is no alternate to thorough history taking and examination in our day-to-day to clinical work. Patient was under the impression that due to PCOS and infrequent periods, she can never be pregnant. Additionally, past medical history can easily misguide the patient as well as clinician (like IBS in this case). This can lead to missed diagnoses, use of unnecessary medication like Hyoscine, Mebeverine etc and delay in appropriate management. Treatment with metformin for PCOS may have played a part in improving this patient's fertility in this case.

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