

FERTILITY FOLLOWING POLYCYSTIC OVARIAN SYNDROME

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INTRODUCTION

Polycystic Ovarian Syndrome is the most common endocrine abnormality affecting women in their reproductive years [1]. The prevalence of Polycystic Ovarian Syndrome in asymptomatic women is thought to be between 16 and 33 percent [2]. However the percentage of women who have clinical manifestations in the presence of morphological polycystic ovaries is as high as 90%. The diagnostic criteria for Polycystic Ovarian Syndrome should include evidence of hyperandrogenism in the absence of non classical adrenal hyperplasia, ovulatory dysfunction and morphological polycystic ovaries. The women who have two out of these three criteria are said to have this disorder [3].

Ultrasound is the gold standard for the diagnosis of Polycystic Ovarian Syndrome. The diagnostic criteria defined by Adams et al still holds today [4]. The idea of both elevated levels of LH and ratios being altered has now been abandoned. Similarly the elevated levels of androgens are unhelpful as these are inconsistently elevated.

The initial management of Polycystic Ovarian Syndrome will depend on the clinical presentation. It is important that these patients optimize their health before embarking on fertility therapy [5]. The principle of management of anovulatory infertility in women with Polycystic Ovarian Syndrome is to induce regular unifollicular ovulation, whilst minimizing the risk of multiple pregnancy and ovarian hyperstimulation syndrome.

CASE REPORT

A 27 years old lady, married for the last three years, reported for the treatment of her

infertility. Her marriage was consanguineous and she was living regularly with her husband. For the last one year she noticed a change in her menstrual cycle. Previously, she had 5 -6 bleeding days after every thirty days. Now she had a cycle of 40 - 45 days and spotting for 1 - 2 days only. She had gained weight during the last year and had body mass index of 27. Her thyroid was clinically normal and there was no galactorrhoea. There was prominent hair growth on face and neck region only.

Her ultrasound report showed normal sized uterus with 9cm x 4.6cm x 3.1cm measurement. Ovaries were bilaterally enlarged with scattered peripheral cysts. Her laboratory investigations showed normal blood complete picture and blood sugar level. Serum FSH and LH levels were normal as were thyroid function tests and serum testosterone levels. Her tubal patency test and husband's semen analysis were also normal.

She was put on half tablet Glucophage (Metformin) twice daily and tablet Diane 35. She was advised dietary changes and life style modifications. After four months of treatment, her physical symptoms improved and she lost five kilograms of weight. She was then put on tablet Clomid (Clomiphene Citrate) 50mg once daily for five days from 2nd to 5th day of cycle. Coital advice was given to the couple. She had her first missed periods after two months of ovulation induction therapy. Her urine pregnancy test was positive at 5 weeks of amenorrhoea but she had abortion at the end of her 6th week of amenorrhoea.

Two months following her abortion, she was again put on Clomiphene Citrate therapy and she conceived again. She was put Injection Profassi (Human Chorionic Gonadotrophin) 5000 IU weekly and tablet Dirogest (Dydrogesterone) three times daily

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for luteal phase support. She continued with a normal pregnancy. Her last ultrasound report showed a single active fetus of crown rump length (CRL) 4.1cm, approximately 11.3 weeks gestation with a closed internal os.

DISCUSSION

The management of anovulation and infertility is the most challenging aspect of Polycystic Ovarian Syndrome. Initially an explanation of the condition to the patient should be undertaken. Insulin resistance occurs in about 30 - 60 percent of women [6]. It is the most prominent feature in women with a high body mass index. The resultant hyperinsulinemia and Insulin like growth factor (IGF-1) stimulates LH induced androgen production from the ovaries. In the liver, the elevated insulin level causes a decreased production of sex hormone binding globulin and Insulin like growth factor (IGF-1) binding proteins, leading to high levels of biologically active androgen and Insulin like growth factor IGF-1[7].

Ovulation induction strategies should begin with simple measures. Even moderate obesity (body mass index > 27kg/square meter) is associated with a body fat distribution leading to an increased waist to hip ratio. The loss of as little as 10 percent of body weight may result in a return to regular ovulation. The role of insulin lowering drugs in the management of Polycystic Ovarian Syndrome has become quite popular. The most extensively used agent is Metformin. A review of 28 prospective studies addressing the effects of metformin confirms its beneficial role in reducing the insulin resistance in menstrual irregularity leading to spontaneous ovulation and ovarian response to ovulation induction therapies [8].

In our patient the diagnosis was suspected on clinical examination and confirmed on ultrasonography report. Her endocrine profile was within normal limits. She was advised weight reduction and put on insulin lowering agent (Metformin). This was combined with anti androgen (Diane 35).

Later when her symptomatology improved, she was given ovulation induction agent (Clomiphene citrate). She became pregnant twice and her second pregnancy continued successfully.

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