

# Study on Post Pregnancy Complications of Polycystic Ovary Syndrome Patients with Hyperandrogenemia

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**Abstract:** Objective: to analyze the complications of pregnant women with polycystic ovary syndrome and hyperandrogenemia. Methods: To observe the clinical reaction of pregnant women with polycystic ovary syndrome and hyperandrogenemia in different age groups. Results: through clinical observation, different stages of maternal pregnancy complications, including postpartum hypertension, uterine fibroids and dyslipidemia. Conclusion: there are more complications after pregnancy in elderly women with hyperandrogenemia, and the incidence of complications after pregnancy in elderly women and young women is relatively high, which should be found and treated early.

**Keywords:** Polycystic ovary syndrome, Hyperandrogenemia, Pregnancy complications, Age

## 1. Introduction

Polycystic ovary syndrome (PCOS) is a common gynecological disease in women of childbearing age. It is a kind of reproductive endocrine metabolic disease. Hyperandrogenemia is common in PCOS, often accompanied by postpartum hypertension, uterine fibroids, dyslipidemia and other complications. At present, the age polarization of pregnant women is serious, and the number of young and old women is increasing year by year. Different age groups also have differences in the complications after pregnancy. The physical function of the elderly women is in a downward trend, while the psychological state of the young women is unstable, the knowledge about pregnancy is insufficient, and the psychological and physiological pressure on pregnancy is greater. Therefore, it is of great significance to investigate the complications of PCOS patients with hyperandrogenemia in different ages.

## 2. Materials and Methods

### 2.1 Clinical Objects

The pregnancy patients with polycystic ovary syndrome and hyperandrogenemia treated in a hospital were selected, and the patients were observed according to the three age stages of old age, school age and young age, and the complications of pregnancy patients were counted.

### 2.2 Clinical Manifestations of Hyperandrogenemia

The data standard of hyperandrogenemia was triterpene (T) > 48ng / dL or free triterpene (FT) > 9pg / ml[1]. High levels of androgen in women can disrupt the development of follicles in women[2]. Its performance for ovulation sparse or anovulation, polycystic ovary or other biochemical characteristics. Hyperandrogenemia can also affect the growth and differentiation of endometrium in PCOS patients. In the late stage of hyperplasia, it was positively regulated by E2 and reached the peak [3]. The expression of insulin receptor in endometrial epithelial cells was higher in PCOS patients than in normal women. Therefore, hyperandrogenemia has a greater impact on the function of endometrium, which may lead to embryo implantation failure or abortion [4]. Chinese medicine performance of menstrual cycle instability, and the amount of abnormal or irregular menstruation and other abnormalities; women have established a normal menstrual period after the interruption of more than 6 months of amenorrhea; women in the absence of contraception at least 12 months failed to conceive infertility; lower abdominal pain, pain location is not fixed, there are caking, and abnormal bleeding

symptoms [5].

### 2.3 Statistical Processing

The data is the database established after the statistics of the clinical manifestations of patients with hyperandrogenemia after pregnancy. Through the item by item check and statistical analysis of the data of different age groups, and scientific and rigorous statistical analysis of the statistical data in spss21.0, all the data are based on the number of cases (n), the difference value of the results is  $p < 0.05$ , with statistical significance.

## 3. Analysis of Statistical Results

The general situation of the three age stages is as follows: (1) there are 58 cases of low-age puerpera, with an average age of 20 years old, gestational weeks between 37-43, including 53 cases of 37-41 weeks, and 5 cases of  $\geq 42$  weeks; (2) there are 1622 cases of school-age puerpera, with an average age of 28 years old, between 22-34 years old, and gestational weeks between 32-43 weeks, including 28 cases of 28-36 weeks, 1568 cases of 37-41 weeks, and 30 cases of  $\geq 42$  weeks; (3) there are 198 cases of elderly puerpera The average age was 38, 9 cases were between 30-43 weeks of gestation, 189 cases were between 37-41 weeks of gestation,  $\cong$  422 cases were above.

### 3.1 Postpartum Hypertension and Postpartum Hemorrhage

The incidence of high blood pressure, postpartum hemorrhage and oligohydramnios in elderly, school-age and young women with PCOS after pregnancy are shown in Table 1.

Table 1 Comparison of General Conditions of Pregnant Women in Different Age Groups [n(%)]

Complications after pregnancy	Young age	Age	Advanced age
HDCP	2(3.7)	42(2.6)	23(11.1)
postpartum hemorrhage	3(5.6)	31(1.9)	13(7.7)
Oligohydramnios	1(1.9)	55(3.4)	12(5.8)

According to table 1, the incidence of postpartum hypertension (HDCP) was 11.1% in elderly women, 2.6% in school-age women and 3.7% in young women. The adaptability of cardiovascular system will gradually disappear with the increase of age, the decline of aortic function will also cause the rise of systolic blood pressure, and the aggravation of vascular endothelial injury. With the decrease of the secretion of skin-derived relaxing factor in blood vessels, it will cause the increase of arteriosclerosis in uterine myometrium, which will improve the incidence of hypertension. There is a significant difference in postpartum hemorrhage between the elderly puerpera and the right-age puerpera and the young puerpera. The elderly puerpera often have uterine surgery, uterine cavity operation and other damage to the endometrium. Re pregnancy will stimulate the placenta to extend to the lower end of the uterus, and then cause postpartum hemorrhage. Postpartum hemorrhage can cause pituitary amenorrhea, anemia cardiomyopathy and other complications.

### 3.2 Uterine Fibroids, Anemia and Thyroid Dysfunction

Hysteromyoma, anemia and thyroid dysfunction after pregnancy in different age groups are shown in Table 2.

Table 2 Comparison of Uterine Fibroids in Different Age Groups after Pregnancy [n(%)]

Complications after pregnancy	Young age	Age	advanced age
anemia	7(13.0)	227(14.0)	11(5.3)
Thyroid dysfunction	1(1.9)	6(0.4)	1(0.5)
fibroid	0(0)	5(0.3)	5(2.4)

According to table 2, the anemia of age-matched PCOS patients is lower than that of younger PCOS patients, and the anemia of older PCOS patients is lower than that of age-matched PCOS patients, with significant differences. In terms of the incidence of uterine fibroids, the incidence of uterine fibroids in elderly PCOS patients is higher than that in age-matched PCOS patients. There is no significant difference in the incidence of uterine fibroids between age-matched PCOS patients and young PCOS patients. The occurrence of uterine fibroids in women with PCOS is related to estrogen and progesterone. Progesterone can promote the division of uterine fibroids, and division can stimulate the

growth of uterine fibroids. There was no significant difference in thyroid among the three age groups.

### 3.3 Dyslipidemia

The incidence of dyslipidemia is as high as 70%, which leads to the increase of lipoprotein profile and low-density lipoprotein subfraction. One of the direct ways to promote cardiovascular disease is dyslipidemia. It also increases the risk of diabetes. At present, the serum TC of young people is gradually increasing, and the risk of dyslipidemia is also increasing. Especially for elderly women, with the increase of age, the index of dyslipidemia will also increase. We should pay attention to the prevention and treatment of dyslipidemia.

## 4. Discussion on Statistical Results

PCOS patients have higher incidence rate of complications after pregnancy. Many post pregnancy complications in PCOS patients are affected by hyperandrogenemia, postpartum hypertension, uterine fibroids and dyslipidemia. Low sex hormone binding globulin (SHBG) in PCOS patients leads to adverse pregnancy outcomes. Anti hyperandrogen therapy before pregnancy in PCOS patients can prevent many adverse pregnancy complications, which is of great significance. Taking compound contraceptives, spironolactone and adrenocortical hormone can reduce androgen. Taking these drugs can promote ovulation, regulate endocrine environment and inhibit abnormal release of adeno-hormone, so as to improve hyperandrogenemia. PCOS patients without reproductive needs can take compound contraceptives to reduce androgen. However, after observation, the embryo implantation rate, clinical pregnancy rate and the first embryo transfer pregnancy rate of PCOS patients who often take contraceptives are relatively high, while those who do not take compound contraceptives have no obvious performance. In traditional Chinese medicine, PCOS is characterized by phlegm dampness, blood stasis and other pathologies, which are mainly responsible for the dysfunction of liver, spleen and kidney, the disharmony of Qi and blood, and the typical endocrine disorder. It can regulate menstrual cycle and resume ovulation by tonifying kidney, soothing liver, promoting blood circulation and removing blood stasis. In the treatment of special prescription and proven prescription, traditional Chinese medicine is used to reduce the content of serum T, inhibit the secretion of LH and promote ovarian ovulation; acupuncture is used to bury thread at acupoints and stimulate dopamine in the brain to regulate endocrine disorder; acupuncture and medicine are used together to stimulate acupoints and take traditional Chinese medicine. The two complement each other and can significantly improve the disease. It can reduce the incidence of small for gestational age infants and improve the health level of PCOS offspring.

## 5. Conclusion

As a common complication after pregnancy, hyperandrogenemia is an important feature of polycystic ovary syndrome (PCOS). Through clinical observation and statistics, patients during pregnancy have more complications after pregnancy, including postpartum hypertension, uterine fibroids and dyslipidemia. The complications of high-age and low-age pregnant women are more than those of right-age pregnant women, so polycystic ovary syndrome (PCOS) Patients with hyperandrogenemia should be found and treated early to reduce its harm to the body.

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