

Evaluation on PCOS in Hypothyroidism among Young Females in the Age Group of 18-25 Years: A Study from Tamilnadu, India

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Abstract:- A multifactorial ailment, polycystic ovary syndrome, is typified by persistent anovulation along with indications of excess androgen without the presence of other particular diseases of the pituitary, thyroid, or adrenal glands that might cause comparable symptoms. Because polycystic ovarian syndrome is frequently accompanied by obesity, elevated insulin resistance and increased metabolic and cardiovascular risk factors are commonly linked to the condition. In Kulasekharam, Tamil Nadu, India, at the Sree Ramakrishna Medical College of Naturopathy and Yogic Sciences and Hospital, the study was conducted. Women who are between the ages of 18 and 25 are taking part in the research. After outlining the purpose of the study, verbal consent was obtained. This survey received 30 responses. There are thirty questions in the survey. The following subjects were included in the questionnaire's parameters: food, menstruation disorders, anxiety, hair care, and digestive problems. The study excluded female subjects who were unwilling or uncooperative. Most women are affected by polycystic ovarian syndrome. Their food is not well-balanced and healthy. Women also need to be better informed on the importance of maintaining good hygiene, eating a balanced diet, drinking enough water, and the dangers of junk food. They also need to learn more about gut dysbiosis and how to prevent exposure to environmental pollutants. Future medical treatments should concentrate on these areas in order to improve young women's general health and wellness.

Keywords:- Stress, Anxiety, Menstrual Disorder, Polycystic Ovary Syndrome.

I. INTRODUCTION

The most prevalent endocrinopathy in women is polycystic ovary syndrome, a complicated illness that affects women who are fertile. A multifactorial ailment, polycystic ovary syndrome, is typified by persistent anovulation along with indications of excess androgen without the presence of other particular diseases of the pituitary, thyroid, or adrenal glands that might cause comparable symptoms. Since multiple genetic, variation, and environmental variables interact and contribute to the pathophysiological processes of polycystic ovarian syndrome, there is no one single cause for polycystic ovary syndrome. Although the precise mechanisms underlying the development of polycystic ovarian syndrome are unknown, genetic factors may play a role. Because polycystic ovarian syndrome is frequently accompanied by obesity, elevated insulin resistance and increased metabolic and cardiovascular risk factors are commonly linked to the condition. The thyroid gland is a butterfly-shaped gland that is situated at the base of the neck. The development and metabolism depend on the hormones it secretes. The gland is a key player in controlling every bodily function. Thyroid problems can take many different forms; hypothyroidism, hyperthyroidism, or euthyroidism, which occurs when thyroid hormone levels are within normal limits, are the conditions that might cause them. Thyroid hormone dysfunction and anatomic anomalies rank among the most prevalent endocrine gland diseases. Thyroid dysfunction has long been known to have a significant impact on the female reproductive system, and thyroid diseases frequently appear in a subtle way. Prolonged hypothyroidism raises serum prolactin levels, which can disrupt gonadotropin secretion.

II. PATHOPHYSIOLOGY

The most frequent endocrine condition affecting women of reproductive age is polycystic ovary syndrome, a complicated and heterogeneous disease. In the general population, polycystic ovarian syndrome and thyroid abnormalities are two of the most prevalent endocrine illnesses. Despite having quite distinct etiopathogenesis, polycystic ovarian syndrome and hypothyroidism share numerous characteristics. Primary hypothyroidism has been linked to alterations in the ovary's cystic composition and an increase in ovarian volume. It is becoming more widely known that, in comparison to the general population, women with polycystic ovarian syndrome are more likely to experience thyroid issues. As yet, the pathophysiological mechanism bridging these two illnesses remains unclear. Perhaps the most obvious link between the two illnesses is their common high body mass index and insulin resistance. Body mass index increases are a fundamental component of polycystic ovarian syndrome. Again, there is an intriguing connection between thyroid function and obesity, with no obvious pathophysiological explanation. The degree of thyroid dysfunction in patients with polycystic ovarian syndrome is correlated with the severity of metabolic problems. Overeating, hunger, and wasting are signs of hyperthyroidism, which is caused by excessive thyroid hormone levels. Metabolic abnormalities associated with polycystic ovarian syndrome and hypothyroidism include dyslipidemia, obesity, increased weight, and insulin resistance. A changed environment characterized by a rise in pro-inflammatory and insulin-resistant molecules is linked to obesity. This results in a relative T3 shortage and an increase in thyroid stimulating hormone levels through unclear mechanisms that cause a decrease in pituitary deiodinase-2 activity. A further route, predicated on leptin, has been suggested that elevated leptin in obesity acts directly on the hypothalamus, causing an increase in TRH production. Elevated amounts of thyroid stimulating hormone, through one of these two mechanisms, stimulate the proliferation of adipocytes. Thyroid stimulating hormone acts on thyroid

stimulating hormone receptors on adipocytes, which increases adipocyte proliferation and increases adipocyte synthesis of pro-inflammatory molecules. Elevated thyroid stimulating hormone was significantly correlated with both insulin resistance and obesity. Thyroid autoimmunity is more common in those with polycystic ovarian syndrome. Patients with polycystic ovarian syndrome had higher levels of thyroid autoimmunity. Thyroid antibody levels are higher, thyroid volumes are larger, and thyroids in females with polycystic ovarian syndrome are more hypoechogenic. The condition known as polycystic ovarian syndrome is known to be hyperestrogenic. B-lymphocytes are stimulated to proliferate by estrogen receptors, which are also found on T cells and macrophages.

III. MATERIALS AND METHOD

The study, which was conducted on female participants between the ages of 18 to 25, was conducted at Sree Ramakrishna Medical College of Naturopathy and Yogic Sciences and Hospital in Kulasekharam, Tamil Nadu, India. The study's purpose was explained, and verbal consent was then acquired. This survey included thirty responses. 30 questions make up the survey. Medication, anxiety, digestive problems, hair care, menstruation disorders, and food were among the conditions covered by the questionnaire's characteristics. Female participants who were unwilling or uncooperative were not allowed to continue with the study.

IV. RESULT

The female respondents ranged in age from 18 to 25. In all, thirty women were present. According to Table 1, 83.33% of women have irregular menstruation, whereas 16.66% do not have irregular menstruation. 66.66% of women report having severe pain during their period, whereas 33.33% report not experiencing such discomfort. 46.66% of women have excessive bleeding during their periods, while 3.33% do not have this symptom. 43.33% have scanty bleeding, while 56.66% do not.

Table 1 Shows PCOS in Hypothyroidism among Females 18-25 Years

S.NO	CONTENT	YES (%)	NO (%)
1	Have irregular menstruation	83.33%	6.66%
2	Have heavy pain during menstruation	66.66 %	33.33%
3	Have excess bleeding during menstruation	46.66%	3.33%
4	Have scanty bleeding	43.33 %	56.66%
5	Have hyper pigmentation in neck	20 %	80%
6	Have acne problems	40%	60%
7	Obese person	46.66%	53.33%
8	Have excess hair growth on face	46.66%	53.33%
9	Undergone any hormonal pills	23.33%	76.66%
10	Have thyroid complaints	26.66%	73.33%
11	Have swelling in neck	10%	90%
12	Have hair loss	80%	20%
13	Feel fatigue	60%	40%
14	Have mood changes	83.33%	16.66%
15	Have diabetes	3.33%	6.66%
16	Have baldness	20%	80%
17	Have depression	50%	50%

18	Have sensitivity during cold atmosphere	56.66%	43.33%
19	Have constipation	36.66%	63.33%
20	Have dry skin	20%	80%
21	Have a symptom of anemia	40%	60%
22	Have delayed puberty	13.33%	86.66%
23	Have intermittent uterine bleeding	6.66%	93.33%
24	Have hoarse voice	20%	80%
25	Have brittle nail	3.33%	96.66%
26	Intake junk foods frequently	70%	30%
27	Feel excess hunger	53.33%	46.66%
28	Have excess sweating	30%	70%
29	Family members having thyroid problems	23.33%	76.66%
30	Have shortness of breath	33.33%	66.66%

Possess hyperpigmentation in the neck and 80% of necks do not exhibit hyperpigmentation. 40% of acne and 60% don't have acne issues. Fat individuals, 53.33% and 46.66%, are not obese. There is excessive facial hair development, 46.66%, there is no excessive facial hair development, 53.33% of cases. Taking any hormonal medication 76.66% and 23.33%, had never taken hormone tablets. Possess thyroid issues 26.66% and 73.33%, this symptom is absent. 10% have a swollen neck and 90% of people do not suffer neck edema. 80% experience hair loss and 20% of people do not experience hair loss. 60% of people report feeling tired, while 40% do not. Experience mood swings 83.33% and 16.66%, this symptom is absent. 3.33% have diabetes, whereas 6.66% do not have diabetes mellitus. 20% of people are bald, and 80% are not. 50% of people suffer from depression. Be sensitive in a chilly environment. 43.33% and 56.66% do not exhibit sensitivity in a cold environment. 63.33% have constipation and 36.66% do not have constipation. Symptoms are signs of dry skin. 80% do not have these symptoms, a sign of anemia, 40% and 60% of people lack the anemic symptoms. Possess postponed puberty 13.33% and 86.66%, this symptom is absent. Experience sporadic uterine bleeding 93.33% and 6.66% of women do not have sporadic uterine bleeding. 20% of people have a hoarse voice, while 80% do not. 3.33% percent of people have brittle nails, while 96.66% do not have this symptom. Thirty percent do not regularly consume junk food, whereas seventy percent do. Excessive hunger was felt by 53.33% and 46.66%; none felt too hungry. Excessive perspiration 30% and 70% do not perspire much. Relatives with thyroid issues, while 76.66% and 23.33% did not have this symptom. Of those who report having shortness of breath, 33.33%, while 66.66% do not have shortness of breath.

V. DISCUSSION

The most frequent endocrine condition affecting women of reproductive age is polycystic ovary syndrome, a complicated and heterogeneous disease. 83.33% of individuals with polycystic ovary syndrome experience irregular menstruation. 66% have severe discomfort during menstruation and 46.66% experience excessive bleeding when menstruating. 43.33% percent more have Scanty bleeding. Only 20% of patients with polycystic ovary syndrome exhibit hyperpigmentation in their neck. 40% more people suffer from acne, and 46.66% more people are obese. Fewer people, 46.66%, have excessive facial hair growth. 26.66% of

patients with polycystic ovarian syndrome also have thyroid problems. The majority of persons with polycystic ovary syndrome experience 80% hair loss, 60% fatigue, and 83.33% mood swings. 20% have a raspy voice. 70% of those with polycystic ovary syndrome consume junk food on a regular basis. 53.33% reported feeling excessively hungry. 23.33% of family members have thyroid issues, while 33.33% have breathing difficulties.

VI. CONCLUSION

The majority of women with polycystic ovary syndrome are found to have irregular periods, boredom, heavy pain, excessive bleeding, scanty blood, pain, weariness, sadness, and irritation at work during their periods. Their everyday routines are not up to par. Women therefore need to be better informed about the need to eat a healthy diet, the dangers of junk food, the effects of gut dysbiosis, and how to avoid exposure to chemicals in the environment. Future medical interventions should concentrate on these areas in order to improve the young woman's general health and wellness.

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