

## **A Study On Thyroid Function Status In Newly Diagnosed Polycystic Ovarian Syndrome Patients**

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### **AIM:**

A cross sectional study about thyroid function status in newly diagnosed PCOS and estimate the prevalence of hypothyroidism by using a single and best indicator of thyroid function status- Thyroid Stimulating Hormone (TSH)

### **MATERIALS AND METHODOLOGY:**

In this study, we selected 73 post pubertal women who came with complaints of menstrual irregularities for a period of three months and /or infertility from Dhanalakshmi Srinivasan Medical college and hospital during the study period of 1 year from May 2023 to April 2024. Patients with the ultrasound evidence of polycystic ovaries were included in the study. This study was approved by Institutional Ethic Committee.

Study design: A cross sectional, observation study.

Inclusion criteria : Women aged between 15-35 yrs with menstrual irregularities or infertility. Ultra sonogram finding: Multiple cysts (> 12 in number of 1-2mm) either one or both ovaries. Exclusion criteria: Patients on treatment for Hypothyroidism, Oral contraceptives, Anticonvulsants, Metformin.

### **OBSERVATION AND RESULTS**

This study shows that there is a correlation between thyroid dysfunction and PCOS which is also supported by the findings. 22% of our patients had hypothyroidism.

### **CONCLUSION:**

This prevalence study helps to bring many submerged / occult disorders to light there by aiding in correct diagnosis and proper treatment and shows that there is a correlation between thyroid dysfunction and PCOS which is also supported by the findings.

### **KEY WORDS**

Thyroid function test, TSH, PCOS, hypothyroid, euthyroid.

# A STUDY ON THYROID FUNCTION STATUS IN NEWLY DIAGNOSED POLYCYSTIC OVARIAN SYNDROME PATIENTS

## INTRODUCTION

As the incidence of infertility and its morbidity are increasing in the recent times. The leading cause for female infertility is menstrual irregularities apart from anatomical and genetic defects. Major contributing factors for this irregular menstruation are from local (ovarian) cause like polycystic ovarian syndrome and /or the systemic cause like hypothyroidism poses risk for anovulation. PCOS and hypothyroidism are the most common endocrine disorders found in young reproductive age group women. With this background we have undertaken this study with the aim to estimate the thyroid function status in newly diagnosed PCOS patients

## AIM AND OBJECTIVE:

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## OBSERVATION

TABLE : 1

THYROID FUNCTION STATUS IN ALL 73 PARTICIPANTS

ASSOCIATION OF HYPOTYROIDISM	NO.OF. INDIVIDUALS	PERCENTAGE
HYPOTHYROID PCOS (>5µU/mL)	16	21.91%
EUTHYROID PCOS (<5µU/mL)	57	78.08%

## PREVALENCE OF

## HYPOTHYROIDISM IN PCOS PATIENTS

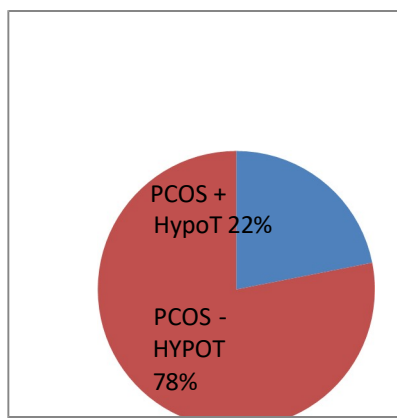


Fig1 - Shows the prevalence of Hypothyroidism in the study population. ~22% (21.9%) of PCOS women (16) were found to have Hypothyroidism.

TABLE 2

DISTRIBUTION OF SERUM TSH IN DIFFERENT AGE GROUP

AGE IN YRS	TSH<5mU/L (No. of. individuals)	TSH>5mU/L (No. of. individuals)	MEAN TSH
15-20	13	2	2.93
21-25	26	8	8.22
26-30	22	4	4.52
31-35	6	2	2.85

### RESULTS:

With serum TSH level of 5 $\mu$ U/L as the cut-off point to diagnose hypothyroidism we have identified the prevalence of hypothyroidism among 73 newly diagnosed PCOS women to be about 22%. In our study, 22% of our patients had hypothyroidism. This shows that there is a correlation between thyroid dysfunction and PCOS which is also supported by the findings

### CONCLUSION:

Our study followed the American Thyroid guidelines recommendation of using serum TSH alone instead of the entire thyroid profile for screening hypothyroidism in adults outpatient department which may be cost effective and economical for the patients and the health care providers.

The prevalence of hypothyroidism in PCOS patients was (22%), which is higher than the prevalence of hypothyroidism in general reproductive age women (2-4%). Thus, prevalence studies helps to bring many submerged / occult disorders

to light there by aiding in correct diagnosis and proper treatment.

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