

Screening on Hypothyroidism Among Females Age 30-40: Case Study From Tamil Nadu, India

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Abstract:- In India, one of the most prevalent diseases are affecting women is hypothyroidism. Both primary and secondary are possible. One in ten Indians have hyperthyroidism, according to statistics. In India, there are about 42 million people who have hypothyroidism. At Sree Ramakrishna Medical College of Naturopathy and Yogic Sciences and Hospital, Kulasekharam, Tamil nadu, India, this study was carried out to evaluate hypothyroidism in females between the ages of 30 and 40. The verbal agreement was obtained by outlining the study's objectives. There were 30 respondents in total for this survey. TSH levels are checked using a blood test during screening. This study shows that in an order to confirm the hypothyroidism diagnosis, medical professionals must rely on biochemical tests. Many people experience a variety of these generalized diseases. Most patients need education as well as a thyroid function test for assessment.

Keywords:- TSH, Screening of Hypothyroidism, Thyroid Dysfunction, Health Care.

I. INTRODUCTION

In India, one of the most prevalent diseases are affecting women is hypothyroidism. It can be primary and secondary. Hypothyroidism affects roughly 1 in 10 people in India. In India, there are about 42 million people who have hypothyroidism. Primary hypothyroidism is the most typical cause of hypothyroidism. The two main types of hypothyroidism are primary and secondary hypothyroidism. When the thyroid gland cannot create enough thyroid hormone, hypothyroidism is referred to as primary hypothyroidism. When the thyroid gland is healthy and the illness is linked to the pituitary or hypothalamus, the less common secondary or central hypothyroidism is diagnosed.

II. PATHOPHYSIOLOGY

The most frequent worldwide cause of primary hypothyroidism is iodine deficiency. Some of its primary clinical symptoms are fatigue, lethargy, cold sensitivity, reduced verbal and intellectual function, slower reflexes, hair loss, dry skin, weight gain, and constipation. Men are less likely to have it than women. The most common cause of primary hypothyroidism is iodine deficiency, which results from the thyroid gland itself being attacked by antibodies or lymphocytes. Other causes include thyroid inflammatory disease, surgery for thyroid cancer or hyperthyroidism, radioactive iodine, treatment for hyperthyroidism or thyroid cancer, and a number of drugs that block the availability or production of thyroid hormone. Hypothyroidism may also occur from a pituitary or hypothalamic disorder that inhibits TSH secretion. This disease is known as secondary or central hypothyroidism because to the antagonistic link between. It is known as secondary or central hypothyroidism because of the inverse relationship between blood T4 and T3 levels and TSH secretion. When there is a high level of serum TSH and a low level of free T4, primary hypothyroidism is suspected. In order to be classified as subclinically hypothyroid, a person must have a high blood TSH level and a normal or low-normal amount of free T4 in the serum. The diagnosis of secondary hypothyroidism is made based on the findings of low serum free T4 and normal or low serum TSH levels. Serum TSH levels can be used in a screening program to find persons who have primary hypothyroidism. The thyroid gland requires iodine in order to secrete thyroid hormone. The generation of thyroid hormone is influenced by TSH, iodine intake, and protein intake. Goiter is caused by the thyroid gland enlarging due to increased pituitary gland secretion.

➤ *Screening For Hypothyroidism*

Although there are no general recommendations for screening the general population for thyroid illness, screening should start between the ages of 30 and 40. The following people are at a high risk of hypothyroidism women over 30 years old, are a family background, Obesity, irregular menstrual cycles, and neck swelling.

➤ *TSH Test*

The TSH level in a blood sample is the best technique to initially examine thyroid function. When the thyroid gland produces insufficient thyroid hormone (primary hypothyroidism), the TSH level is high. When the TSH level is low, the thyroid is likely releasing too much thyroid hormone, which is known as hyperthyroidism. Rarely, a pituitary disorder that prevents it from producing enough TSH to stimulate the thyroid (secondary hypothyroidism) might cause a low TSH. Normal TSH reading indicates that the thyroid is operating normally in the majority of healthy people.

III. MATERIALS AND METHOD

At Sree Ramakrishna Medical College of Naturopathy and Yogic Sciences and Hospital, Kulasekharam, Tamil Nadu, India, the study is being conducted as a screening procedure by measuring the serum TSH levels of females in

the age range of 30 to 40. The verbal agreement was obtained by outlining the study's objectives. There were 30 study participants in all. Female participants who refused to cooperate or were not eager to participate in the study were not included. The hypothyroidism diagnosis must be supported by biochemical tests, according to health care professionals. Most patients need knowledge and a thyroid function test for evaluation as they suffer from a variety of these non-specific illnesses.

➤ *Scope*

This suggestion offers direction to medical professionals, decision-makers, and patients on thyroid dysfunction screening. These suggestions are applicable to people who have already been diagnosed with thyroid dysfunction, which is uncommon among women after screening.

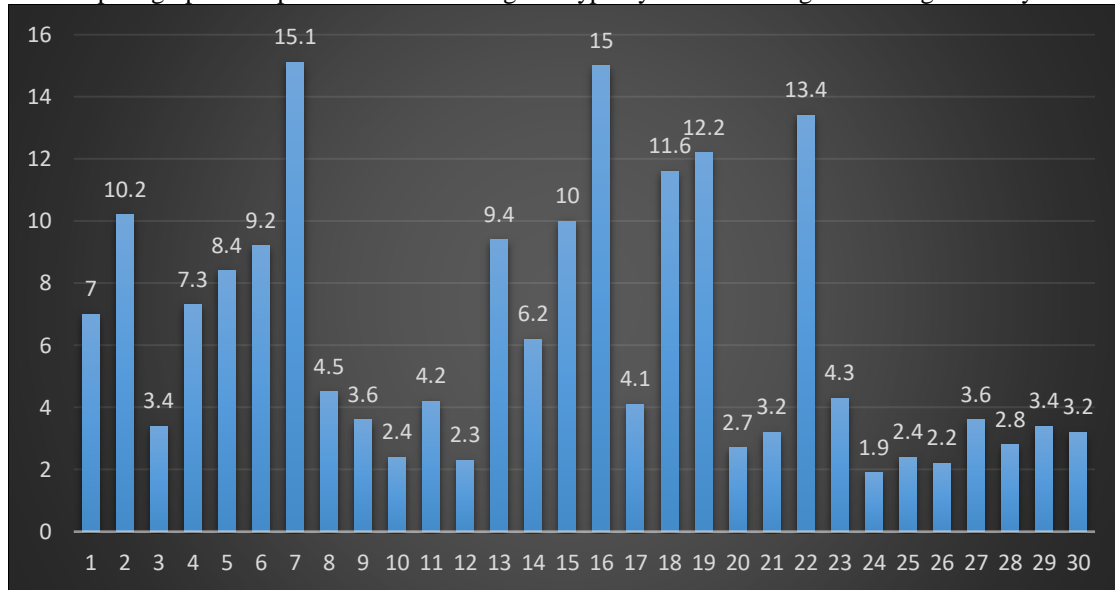
➤ *Resource*

The entire amount of resources needed to screen for thyroid problems. The unit costs of TSH laboratory tests (about 450 Rupees each), as well as additional expenses paid by patients and the provinces and territories for diagnostic exams, provider fees, therapy, monitoring, and ongoing medical care for cases of thyroid dysfunction that have been discovered.

Table 1 screening on hypothyroidism among females age 30-40 years

S. NO	PATIENT	TSH VALUE	NORMAL TSH VALUE
1	Patient 1	7 mIU/L	0.5 - 5.0 mIU/L
2	Patient 2	10.2mIU/L	0.5 - 5.0 mIU/L
3	Patient 3	3.4mIU/L	0.5 - 5.0 mIU/L
4	Patient 4	7.3mIU/L	0.5 - 5.0 mIU/L
5	Patient 5	8.4mIU/L	0.5 - 5.0 mIU/L
6	Patient 6	9.2mIU/L	0.5 - 5.0 mIU/L
7	Patient 7	15.1mIU/L	0.5 - 5.0 mIU/L
8	Patient 8	4.5mIU/L	0.5 - 5.0 mIU/L
9	Patient 9	3.6mIU/L	0.5 - 5.0 mIU/L
10	Patient 10	2.4mIU/L	0.5 - 5.0 mIU/L
11	Patient 11	4.2mIU/L	0.5 - 5.0 mIU/L
12	Patient 12	2.3mIU/L	0.5 - 5.0 mIU/L
13	Patient 13	9.4mIU/L	0.5 - 5.0 mIU/L
14	Patient 14	6.2mIU/L	0.5 - 5.0 mIU/L
15	Patient 15	10mIU/L	0.5 - 5.0 mIU/L
16	Patient 16	15mIU/L	0.5 - 5.0 mIU/L
17	Patient 17	4.1mIU/L	0.5 - 5.0 mIU/L
18	Patient 18	11.6mIU/L	0.5 - 5.0 mIU/L
19	Patient 19	12.2mIU/L	0.5 - 5.0 mIU/L
20	Patient 20	2.7mIU/L	0.5 - 5.0 mIU/L
21	Patient 21	3.2mIU/L	0.5 - 5.0 mIU/L
22	Patient 22	13.4mIU/L	0.5 - 5.0 mIU/L
23	Patient 23	4.3mIU/L	0.5 - 5.0 mIU/L
24	Patient 24	1.9mIU/L	0.5 - 5.0 mIU/L
25	Patient 25	2.4mIU/L	0.5 - 5.0 mIU/L
26	Patient 26	2.2mIU/L	0.5 - 5.0 mIU/L
27	Patient 27	3.6mIU/L	0.5 - 5.0 mIU/L
28	Patient 28	2.8mIU/L	0.5 - 5.0 mIU/L
29	Patient 29	3.4mIU/L	0.5 - 5.0 mIU/L
30	Patient 30	3.2mIU/L	0.5 - 5.0 mIU/L

Graph 1 graphical representation screening on hypothyroidism among females age 30-40 years



IV. CONCLUSION

The most accurate test for assessing thyroid function for the vast majority of individuals is one that measures TSH. Primary care doctors should not frequently need to order another thyroid biochemical test. Most of the time, no further testing is necessary if the TSH is within the normal range. However, there are a number of important considerations that clinicians must keep in a mind when interpreting a TSH test. The usual reference for the normal range of TSH is between 0.5 and 5 mIU/mL. This age-related increase in TSH may be an adaptive mechanism has given the evidence of higher mortality in advanced age. Hypothyroidism can present with a wide range of symptoms that are rather frequent in the general population. As a result, medical professionals are forced to rely on biochemical tests to confirm the hypothyroidism diagnosis. Most patients need knowledge and a thyroid function test for evaluation as they suffer from a variety of these non-specific illnesses.

RECOMMENDATIONS

- Every females of age 30 should undergo the thyroid screening.
- For improved generalization, this study can be repeated with larger samples.
- Every females of age 30 should be educated about thyroid dysfunction through public health awareness campaigns.
- The provision of a help line for patients with thyroid dysfunction.

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