

Incidence of hypothyroidism in Iraqipatients;cross-sectional study

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ABSTRACT

This investigation was done for study the Incidence of hypothyroidism in Iraqi patients. In a cross-sectional study conducted in Baghdad between 2021 and 2023, 175 patients with suspected hypothyroidism were taken and asked about their signs, such as weight gain, intolerance to cold, loss of appetite, constipation, irregular menstrual cycles, slow heart rate, as well as the presence or absence of a goiter, among other things. neck ultrasound was performed, and blood T3, T4, and TSH levels were measured by using kits from Linear company. The data demonstrated that the total incidence of hypothyroidism case was 9.7%, from these 8% were subclinical and 1.7% clinical, furthermore the findings demonstrated that hypothyroidism incidence was high in females (10.1%) than male (7.4%). The current results showed that hypothyroidism was occurred significantly at age more than 50 years.

In conclusion, the incidence of hypothyroidism was detectable at tangible percentage, this disease was occurred mostly in female at age more than 50 years.

Keywords: Iraq, Hypothyroidism, age, gender.

INTRODUCTION

Many internal functions, including metabolism, energy balance, and control, are influenced by thyroid hormones. Thyrotrophin (TSH), a hormone released by the anterior pituitary gland, stimulates the synthesis of the two primary thyroid hormones, thyroxine (T4) and triiodothyronine (T3). If your TSH levels are fluctuating but your T3, T4, and other thyroid hormones are normal, you may have asymptomatic hypothyroidism or hyperthyroidism [1].

Most instances of abnormally high or low TSH are linked with vague and not life-threatening symptoms.[2] Some research has found, however, that people with aberrant TSH have a higher chance of developing cardiovascular disease, cognitive decline, polycystic ovary syndrome, irregular bone turnover, and certain metabolic syndrome [3-7].

Major risk factors potentially linked to asymptomatic thyroid illnesses and the development to overt thyroid disease include a high baseline TSH level, age (over 60), feminine sex, and the existence of thyroid antigens [8-10].

It is even controversial how to treat mild or asymptomatic illnesses. Subclinical hypothyroidism is rarely treated except in rare circumstances such as pregnancy, infertility, or people at high risk of developing full-blown hypothyroidism [11]. Age, a high risk of coronary disease or osteoporosis, or a high risk of development to overt hyperthyroidism are all factors that prompt doctors to consider treating silent hyperthyroidism [8,12].

Many studies found a high incidence of asymptomatic thyroid disorders across a variety of groups, with findings suggesting that more than half of those cases would develop into overt disease within 20 years. To lessen the anticipated clinical effect of these conditions, it is crucial to screen for and monitor asymptomatic conditions of thyroid issues and forecast development to overt thyroid disorders [13-17].

This investigation was done for study the Incidence of hypothyroidism in Iraqi patients.

MATERIALS AND METHODS

In a cross-sectional study conducted in Baghdad between 2021 and 2023, 175 patients with suspected hypothyroidism were taken and asked about their symptoms and signs, such as weight gain, loss of appetite, intolerance to cold, constipation, irregular menstrual cycles, slow heart rate, as well as the presence or absence of a goiter, among other things.

Neck ultrasound was performed, and blood T3, T4, and TSH levels were measured by using kits from Linear company.

Two categories of patients were created based on the results of the patient's narrative, physical evaluation, neck ultrasound, and thyroid stimulating hormone (TSH) blood tests.

TSH values above the top limit of the normal range and a decline in T4 and/or T3 below the normal limit are considered to be indicative of subclinical hypothyroidism, even in asymptomatic individuals.

Clinical hypothyroidism 2: signs of hypothyroidism, elevated TSH, and insufficient levels of thyroid hormones T4 and/or T3.

SPSS version 23 was used for the statistical analyses.

RESULTS AND DISCUSSIONS

The data demonstrated that the total incidence of hypothyroidism case was 9.7%, from these 8% were subclinical and 1.7% clinical, and furthermore the findings demonstrated that hypothyroidism incidence was high in females (10.1%) than male (7.4%) (Table 1, Figure 1).

Table 1. Incidence of Hypothyroidism according to the gender

Gender	Subclinical	Clinical	Total
Male (27)	2 (0.7%)	0 (0%)	2 (7.4%)
Female (148)	12 (8.1%)	3 (2%)	15 (10.1%)*
Total	14 (8%)**	3 (1.71%)	17 (9.7%)

P values *, $P \leq 0.04$

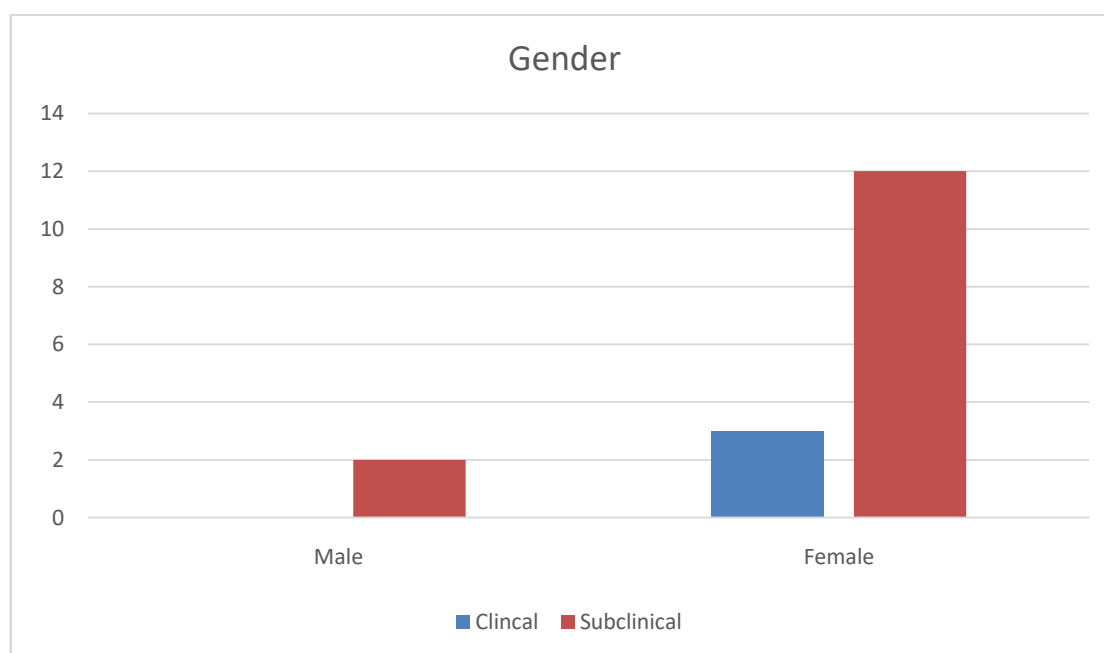


Figure 1. Incidence of Hypothyroidism according to the gender

Increased TSH content is the characteristic of primary hypothyroidism in the lab and the most accurate test for identifying early thyroid failure.[18] .

In the silent version, the patient has no symptoms despite having an elevated TSH level and average T4 and T3 levels [19].

In contrast to a study by [20], wherein 11.4% of patients had clinical hypothyroidism, this one discovered that 9.7% of people who took part had some kind of thyroid disease, most commonly hypothyroidism, the prevalence of hypothyroidism ranged from 1.7% to 8.0% among these individuals. The number of females to male hypothyroidism diagnoses in the Iraqi sample was 6 to 1 [21].

The current results showed that hypothyroidism was occurred significantly at age more than 50 years (Table 2).

Table 2. Incidence of Hypothyroidism according to the age groups

Age groups	Subclinical	Clinical	Total
20-29 years	1	0	1 (5.9%)
30-39 years	2	0	2 (11.8%)
40-49 years	2	0	2 (11.8%)

50-59 years	4	1	5 (29.4%)*
60-70 years	5	2	7 (41.2%)**
Total	14	3	17

$P \leq 0.02$

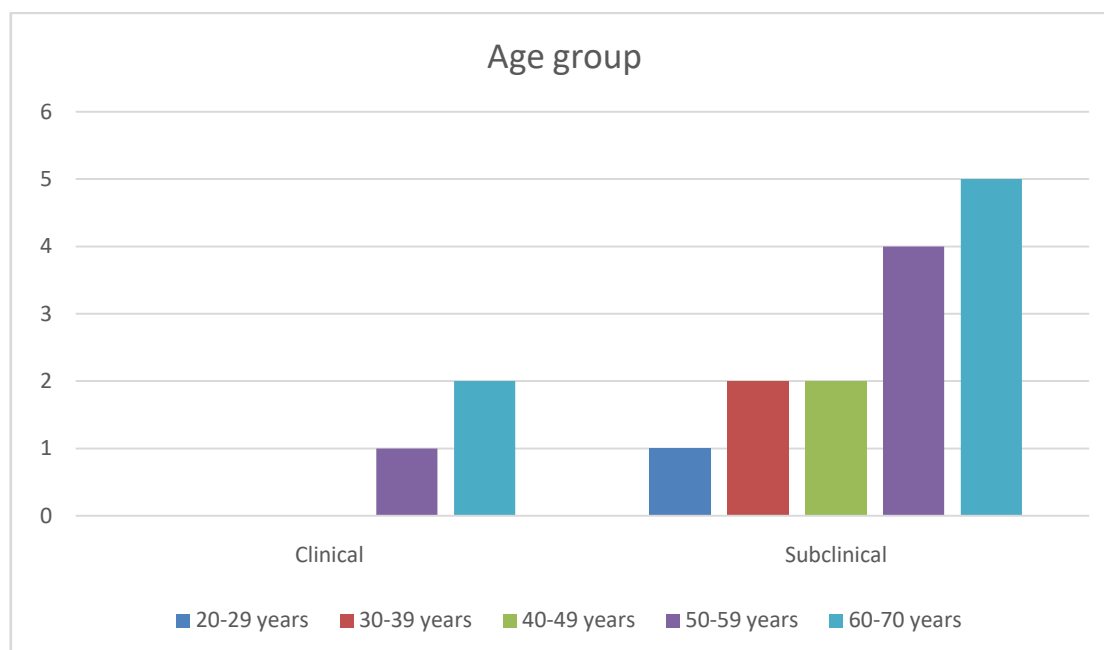


Figure 2.Incidence of Hypothyroidism according to the age groups

The majority of patients in this study were at ages of more than 50 years; a higher prevalence was seen in women aged 60 and up in a study by [20], and a higher prevalence was seen in women aged 65 and up in a study by [22]. While 0.3% to 0.4% of the population suffers from hypothyroidism, the incidence rises with age and women are more likely to be impacted than men. [23].

When researchers looked at the ages and sexes of 25237 thyroid patients, they found that women were more likely to experience symptoms than men were (73% versus 76%), while adults made up 64.0% of the total and seniors made up 27.0% [24].

A different group of scientists set out to investigate Thyroid Function as it related to gender and age in a sizable Chinese population. Women between the ages of 35 and 45 were found to have a significantly greater prevalence of thyroid disorder than men of the same age range [25].

CONCLUSION

The incidence of hypothyroidism was detectable at tangible percentage, this disease was occurred mostly in female at age more than 50 years.

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