Original Research Article

A Study of Thyroid Dysfunction in Diabetes Mellitus

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International Archives of Integrated Medicine, Vol. 4, Issue 9, September, 2017.
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Available online at http://iaimjournal.com/
ISSN: 2394-0026 (P) **ISSN: 2394-0034 (O)**
Received on: 15-08-2017 **Accepted on:** 23-08-2017
Source of support: Nil **Conflict of interest:** None declared.
How to cite this article: Singh Y, Pasha A, Suhail Bin Ahmed. A Study of Thyroid Dysfunction in Diabetes Mellitus. IAIM, 2017; 4(9): 133-135.

Abstract

Background: The prevalence of thyroid dysfunctions is encountered high in known diabetic patients. It is quiet commonly understood that patients who has one autoimmune problem generally tends to develop another.

Materials and methods: Three hundred twenty known diabetic patients who attended the Department of Internal Medicine were taken up for the study. This study was done in the Department of Internal Medicine, Deccan Medical College, Hyderabad.

Results: Both hypothyroidism and hyperthyroidism was significantly seen in known diabetics.

Conclusion: Hypothyroidism was the most common kind of thyroid disorder encountered in our study.

Key words

Diabetes Mellitus, Thyroid dysfunction, Thyroid function test.

Introduction

The prevalence of thyroid dysfunction is high in India. According to an estimate around forty two million people in India are suffering from thyroid dysfunctions [1]. The prevalence of thyroid dysfunctions is encountered high in known diabetic patients [2, 3]. It is quiet commonly understood that patients who has one autoimmune problem generally tends to develop another. Hypothyroidism is by far the most common type of thyroid disorder encountered amongst all the thyroid dysfunctions. The clinical and subclinical hypothyroidism accounts for about 4 to 15% of the total population [4]. This study puts in a sincere effort to understand the thyroid dysfunctions in known diabetes mellitus patients. This study is intended to help the

practicing doctors to understand the relations of different thyroid dysfunctions in diabetes mellitus and thus help them in their daily practice.

Aim

To study the different thyroid dysfunctions encountered in known diabetes mellitus patients.

Materials and methods

The study sample included 320 patients who were known diabetic and who attended regular clinical check up in the Department of Internal Medicine, Deccan College of Medical Sciences, Hyderabad. Detailed clinical examination was conducted and the fasting blood samples were collected and sent to the Central Laboratory for the detailed thyroid function tests. Blood glucose was also estimated. The reports were collected and the statistics were calculated using the latest SPSS software 2015.

Results

Age and sex wise frequency of different Thyroid dysfunctions in Diabetes Mellitus was as per **Graph – 1** and **Table - 1**.

Graph – 1: Frequency of different Thyroid dysfunctions in Diabetes Mellitus.
Blue: Diabetic Patients without thyroid dysfunction.
Orange: Diabetic patients with subclinical hypothyroidism.
Violet: Diabetic patients with hypothyroidism.
Grey: Diabetic patients with hyperthyroidism.

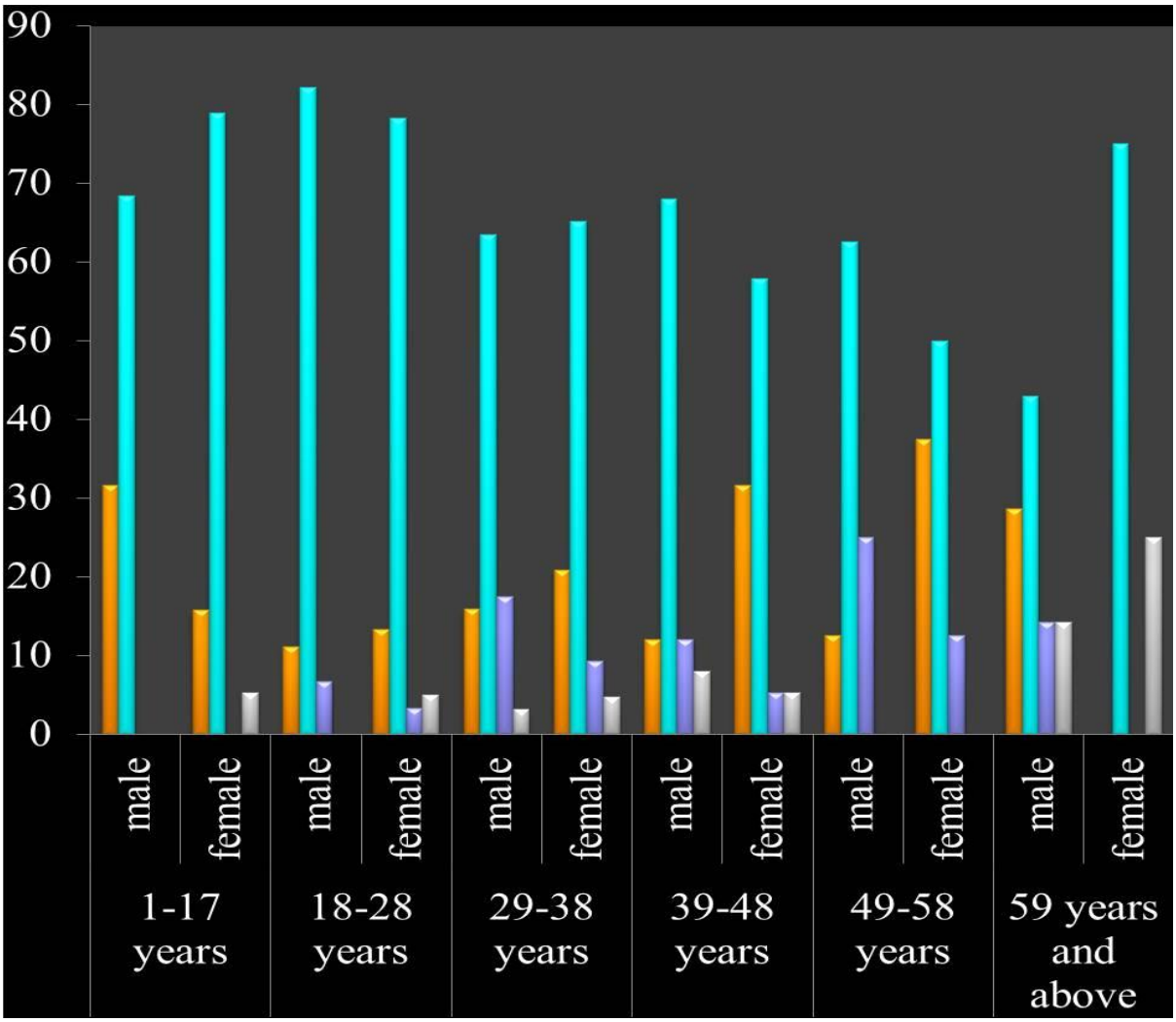

Table – 1: Thyroid dysfunction in diabetes mellitus.

Thyroid dysfunction	Present	Absent	X^2 value	P value
Hyperthyroidism	16	314	12.988	0.05
Hypothyroidism	38	288	8.920	0.030

Discussion

In our study both hypothyroidism and hyperthyroidism is significantly seen in the known diabetics. It was seen more in the aged individuals. With progression of age the clinical hypothyroidism and hypothyroidism were encountered more in frequency. The males were affected more commonly. In comparison to other study where the female patients were more commonly seen our study has observed the opposite [5]. This may be due to less number of female study patients. In our country, the females' health status is neglected and this may be a fact which points to the less number of frequencies in our study. It is important for a practicing physician to identify the other metabolic disorders associated with diabetes mellitus.

Conclusion

Hypothyroidism was the most common kind of thyroid disorder encountered in our study.

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