Original Research Paper

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General Surgery

IS IT JUSTIFIABLE TO INCLUDE THYROID FUNCTION TESTS AS ROUTINE ASSESSMENT OF PATIENTS ADMITTED IN SURGERY WARD OF TERTIARY CARE HOSPITAL AND MEDICAL COLLEGE DEALING MAINLY RURAL POPULATION?

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ABSTRACT Thyroid disorders are very common in general population in India as well as worldwide. Nearly one third of world's population lives in areas of Iodine deficiency. As there are no Indian guidelines for screening of hypothyroidism we undertake this study to determine the thyroid disorders in Indian rural population. All patients admitted in surgical ward were screened for thyroid function tests. A large number of persons in general population are suffering from thyroid disorders and also from subclinical hypothyroidism. Subclinical hypothyroidism presents mainly in the agoitrous form and is associated with significant co-morbidity in form of lethargy, fatigue and weight gain which is mostly undiagnosed or neglected in perimenopausal population .
We conclude that it is now must to investigate the patient for thyroid disorders before undertaking patient for any elective or emergency surgery.

KEYWORDS : Preoperative assessment, Thyroid disorders

Introduction

It is common to find patients suffering from thyroid disorders mainly Hyperthyroidism, Hypothyroidism and subclinical hypothyroidism, which are being admitted by surgeons in surgical ward for conservative management or surgical intervention.

Thyroid disorders are very common in general population in India as well as worldwide. Nearly one third of world's population lives in areas of Iodine deficiency. (32)

Our main aim is to find out the incidence of subclinical and clinical hypothyroidism in patient admitted in our surgery ward. Patients were admitted for elective and emergency surgery. Most of the patients were from rural background and were never investigated for any thyroid disorders in past.

Subclinical hypothyroidism (SCHT) is defined as high S.TSH concentration with normal serum free thyroxine (FT4) & free tri-iodo-thyroxine (FT3) values, associated with few or no signs and symptoms of hypothyroidism (1). Subclinical hypothyroidism is the most prevalent thyroid disorders affecting 3-15% of adult population. (2). Its incidence increases with advanced age (3,4,5), female gender (4,6) and greater dietary iodine intake (7,8,9,10).

Different studies have proved that subclinical hypothyroidism is associated with hyperlipidemia (3,5,10,11,12,13,14), neuromuscular (15,16,17) and neuropsychiatric symptoms (15,16,17), myocardial dysfunction (18,19,20,21) and decreases in quality of life with progression to overt hypothyroidism (5,10,12)

As there are no clinical symptoms & signs, “American thyroid association (ATA)” has recommended routine screening of general population of both males and females, starting at age 35 years and then every five years. It will help in early detection and treatment of subclinical hypo-thyroidism (33).

As there are no Indian guidelines for screening of hypothyroidism we undertake this study to determine the thyroid disorders in Indian rural population.

Aims and objective

To determine the patients with abnormal range of thyroid hormone and serum TSH including subclinical hypothyroidism in population admitted to our surgical ward.

Materials and Method

This study was conducted during January 2016 to February 2017 in our tertiary care hospital. The patients which were admitted in general surgery ward for any surgical operation or conservative treatment were included in this study. Patients which were older than 12 years were included in the study.

All patients were screened for thyroid function tests. Patients who were known cases of thyroid disorders were also included in this study, if they were known of their status.

Subjects with known chronic illness or on chronic medication & pregnant females were excluded from the study.

Data entry and statistical analysis were performed using the Microsoft excel and Statistical package of social science (SPSS) windows version 11.0 software. Chi-square test was applied to find out the results (34).

A p value <0.05 was taken for statistical significance (34).

Results

All the statistical data of admitted patients in surgery ward were analysed by making a table showing admitted patients and the total number of patients having hypo or hyper thyroid disorders. The table also depicts the male and female patients separately.Subclinical hypothyroid patients were included in hypothyroid category. See table 1

All the data was analysed with chi-square test. The test showed 'p' value < 0.00001.

Thyroid disorders were more in female patients in both the groups viz hypothyroidism and hyperthyroidism.

Discussion

Screening studies to know incidence of thyroid disorders have provided valuable information in understanding the epidemiology of all thyroid disorders in the population worldwide (33). There is a rise in prevalence of all thyroid disorders in India in post iodization era (33).

There are only few research papers which have published screening studies, Only few literature is published on prevalence of these disorders in all regions of India.

Present study has clearly confirmed that SCHT is most common thyroid disorder in our patients, followed by hypothyroidism and hyperthyroidism.

Incidence increases with age, because of increasing immunity with age (3). Prevalance was more in females & it also increased with age (21). Prevalance was also more in postmenopausal women (21).

Conclusion

A large number of persons in general population are suffering from thyroid disorders and also from subclinical hypothyroidism.

Subclinical hypothyroidism presents mainly in the agoitrous form and

is associated with significant co-morbidity in form of lethargy, fatigue and weight gain which is mostly undiagnosed or neglected in perimenopausal population (33).

We conclude that it is now must to investigate the patient for thyroid disorders before undertaking patient for any elective or emergency surgery.

Table: 01

		Hypo-Thyroid includes SCHT			Hyper Thyroid			
Month	Total Patient	M	F	Total	M	F	Total	Grand Total
Jan.16	284	02	07	09	00	00	00	09
Feb.16	137	01	04	05	01	01	02	07
Mar.16	199	01	06	07	00	00	00	07
Apr.16	225	02	07	09	00	02	02	11
May.16	139	02	04	06	00	00	00	06
Jun.16	195	01	08	09	00	02	02	11
Jul.16	206	01	07	08	00	01	01	09
Aug.16	340	03	10	13	01	00	01	14
Sep.16	207	02	06	08	00	00	00	08
Oct.16	162	02	04	06	00	01	01	07
Nov.16	228	01	07	08	00	01	01	09
Dec.16	267	02	05	07	00	01	01	08
Jan.17	217	01	08	09	00	00	00	09
Feb.17	157	01	03	04	00	00	00	04
	2963	22	86	108	02	09	11	119

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