



Is the prevalence of thyroiditis increasing? Findings of an audit of thyroid patients

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Abstract

Thyroiditis is an inflammatory condition affecting the thyroid gland. It is a common condition for goitrous hypothyroidism. Various prevalence rates for this condition are cited in literature¹. The data on thyroiditis in Sri Lanka is sparse and the precise incidence in Sri Lanka is not known. The widespread use of Iodized salt is thought to be the cause for increasing incidence of thyroiditis. The objectives of the study were to assess the patients with thyroiditis in terms of their gender, age, and clinical presentations, identify the clinical sub types of thyroiditis in this study group and to find cytological and biochemical parameters of these patients. The data was collected from 43 patients with thyroiditis out of 350 patients with thyroid diseases who attended the surgical out patient clinic of the surgical unit III of Teaching Hospital Karapitiya from July 2004 to Jan. 2007. All these patients were studied in terms of their clinical presentation, demography, clinical type of the goiter, thyroid functional status, cytology of the thyroid and method of treatment and the data was analyzed. The number of patients with thyroiditis was 43 out of 350 patients studied. That is 12% of the study group. The male to female ratio was 42: 1. The mean age was 33 yrs while it ranged from 12yrs – 63 yrs. Their presenting complaints were goiter – 40 (93%), voice changes – 5 (12%), pressure symptoms – 4 (9%), toxic features – 4 (9%), pain – 3 (7%), cervical lymph nodes – 2 (5%). Majority of patients presented with a duration of less than 3 months (53%). Fifty two percent of the patients had multi nodular goiters. There was equal number of hypothyroid and euthyroid patients (21 from each). Only one patient was hyper thyroid. The diagnosis was made in most of the patients by FNAC (81%). The rest of the patients had colloid goiters and their thyroid peroxidase antibody level was elevated. The clinical features did not help the diagnosis of thyroiditis. Because of this we would like to recommend directing the investigation to find the possibility of thyroiditis in suspicious patients with thyroid diseases and further studies are required for making diagnosis & management protocols.

Keywords: prevalence, thyroiditis, thyroid patients

Introduction

Thyroiditis is an inflammatory condition affecting the thyroid gland. It refers to several disorders that cause an inflammation of the thyroid. The data on thyroiditis in Sri Lanka is sparse and the precise incidence in Sri Lanka is not known¹. However, the prevalence is seemed to be increasing. The widespread use of Iodized salt is thought to be the cause for this increase incidence of thyroiditis². The aim of the study was to assess the patients with thyroiditis in terms of their gender, age, clinical presentations, clinical sub type of the thyroiditis, and cytological and biochemical parameters.

Methods

Three hundred and fifty patients who attended the surgical unit III of Teaching Hospital Karapitiya from July 2004 to Jan. 2007 with thyroid diseases were studied to find their clinical abnormalities. There were 43 patients with thyroiditis. The clinical and investigative parameters of these 43 patients were further assessed and the data was analyzed.

Results

The total number of patients with thyroiditis was 43. This account for 12% of the total number of thyroid patients assessed during this period. There was only one male patient. Therefore the female to male ratio in this study was 42: 1. The mean age of this study group was 33 yrs and it ranged from 12yrs – 63 yrs.

the following table (Table 1) shows the different symptoms they had on presentations. The durations of symptoms at presentations were less than three months in most of these patients (Table 2). Forty patients had goiters while three patients had normal thyroid on examination. Fifty two percent of them had multinodular goiters (MNG) (Table 3).

Table 1.

Symptoms	Number
Pressure symptoms*	04
Toxic symptoms	04
Pain	03
Change in voice	05
Goiter**	27

* Discomfort on swallowing and/or difficulty in breathing

** These patients did not complain of any other symptoms

Table 2.

Duration of presentations	Number of patients
Less than 3 months	23
Three months to one year	06
One to three years	06
More than three years	08

Table 3.

State of the thyroid gland on palpation	Number of patients
MNG	21
Diffuse goiter (DG)	10
Solitary thyroid nodule (STN)	09
Normal thyroid	03

According to the thyroid hormonal assay 49% of them were hypothyroid at presentation. The fine needle aspiration cytology (FNAC) showed thyroiditis features in 81% of the study group. The rest of the group had colloid goiters.

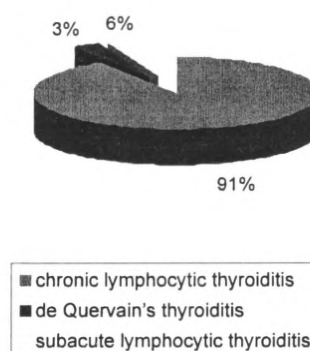
Discussion and Conclusions

Thyroiditis is a common condition for goitrous hypothyroidism. Various prevalence rates for this condition are cited in literature³. An autopsy study in UK showed the prevalence rate of 5 to 15 percent in women and 1 to 5 percent in men. The percentage of thyroiditis in this group male and females together was

12%. Although there is no internationally accepted classification of autoimmune thyroid diseases³ the following sub types are mentioned.

1. Hashimoto's thyroiditis (*chronic lymphocytic thyroiditis*)
2. painful thyroiditis (*de Quervain's thyroiditis / subacute granulomatous thyroiditis*)
3. painless thyroiditis (*subacute lymphocytic thyroiditis*)
 - a. *sporadic*
 - b. *postpartum*
4. Reidel's invasive fibrous thyroiditis
5. Acute suppurative thyroiditis

The most common type is the *Chronic lymphocytic thyroiditis* or Hashimoto's thyroiditis. The distribution of sub types in this series was as follows (Figure 1).



1. *****

We did not encounter postpartum thyroiditis, Reidel's invasive fibrous thyroiditis and acute suppurative thyroiditis. However the commonest type in our study also was Hashimoto's thyroiditis. Few etiological factors have been mentioned for this condition^{3, 4}. These include genetic factors, smoking, correction of iodine insufficiency, drugs (amioderon, Lithium) and radiation. Out of this iodine supplementation is thought to be the main factor for increase incidence of thyroiditis. This is due to the fact that iodine induces autoimmunity in the thyroid gland¹.

Patients with chronic autoimmune thyroiditis present with hypothyroidism, goiter, or both³. The goiter is usually diffuse and may tender. However in this series the clinical features did not support the diagnosis of thyroiditis. Only 50% of the patients were hypothyroid in this study. One patient was hyper thyroid and the others were euthyroid. On the other hand forty patients had enlarged thyroid at presentation and three patients had normal thyroid (Table 5). Out of these, 21

patients had multi nodular goiters (MNG). The distribution of the functional state and the type of the goiter is shown in the table (Table 4).

Table 4.

Functional state	Number of patients
Hypothyroid	21
Euthyroid	21
Hyperthyroid	01
Total	43

Table 5:

Type of goiter	Number of patients
Diffuse	10
Solitary thyroid nodule	09
MNG	21
Normal thyroid	03
Total	43

Thyroid peroxidase antibody was positive in 50% of the patients. The cytology was the main factor which supports the diagnosis in this series. FNAC showed features of thyroiditis in 81% of the 43 patients. The clinical sub types identified according to the FNAC features are shown in the Table 6.

Table 6.

Type of thyroiditis	Number of patients
chronic lymphocytic thyroiditis	31
de Quervain's thyroiditis	01
subacute lymphocytic thyroiditis	02
Colloid goiter*	05

* Thyroid peroxidase antibody was positive in these patients

The natural history of the disease varies with the subtype. inflammatory destruction of the thyroid may lead to transient thyrotoxicosis in painless sporadic thyroiditis, painless postpartum thyroiditis, and painful subacute thyroiditis, as preformed thyroid hormones are released from the damaged gland. The hypothyroid phase of thyroiditis results from the gradual depletion of stored thyroid hormones. Although chronic hypothyroidism is most closely associated with Hashimoto's thyroiditis, all types of thyroiditis may progress to permanent hypothyroidism⁴. The most dangerous sequelae is the malignant transformation. For instance long standing lymphocytic thyroiditis may leads to lymphoma. The risk of this disease is increased by a factor of 67 in patients with Hashimoto's thyroiditis⁴. Therefore it is important to identify thyroiditis among thyroid disease patients. Therefore further evaluation and study is necessary to make protocols for early diagnosis and management.

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