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St. Paul's Hospital Millennium Medical College

**CLINICAL AND SOCIO-DEMOGRAPHIC PROFILE OF PATIENTS WITH THYROID
DISOREDE AT SAINT PAUL HOSPITAL MILLENNIUM MEDICAL COLLEGE
ENDOCRINE CLINIC**

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ENDOCRINE CLINIC**

**A RESEARCH PAPER TO BE SUBMITTED TO THE DEPARTMENT OF INTERNAL
MEDICINE ,SAINT PAUL HOSPITAL MILLENNIUM MEDICAL COLLEGE ,FOR
THE PARTIAL FULLFIMENT OF THE REQUIURMENT OF THE MASTERS OF
DOCTOR OF MEDICINE**

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ADDIS ABABA

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Table of Contents

Acknowledgement	I
Abbreviations	V
ABSTRACT.....	VI
1: INTRODUCTION	1
1.1. BACKGROUND INFORMATION.....	1
1.2. STATEMENT OF THE PROBLEM	2
1.3 Significance of the study	2
2: LITERATURE REVIEW	3
2.1 Socio-Demographic profile of patients of patients with thyroid disorder.....	3
2.2 Clinical profile of patients with thyroid disorder	3
3:OBJECTIVES	6
3.1 General objective	6
3.2 Specific objective	6
4: METHODS AND MATERIALS.....	7
4.1 Study area and Study period.....	7
4.2 Study design	7
4.3 Population	7
4.3.1 Source population.....	7
4.3.2 Study population.....	7
4.4 Inclusion and Exclusion criteria.....	7
4.4.1 Inclusion criteria.....	7
4.4.2 Exclusion criteria	7
4.5 Sample size determination and Sampling technique	7
4.5.1The sample size can be determined by.....	7
4.5.2 Sampling technique:	8
4.6Study Variables	8
4.6.1 Socio-Demographic variables:-Age, Sex, Area of residence	8
4.6.2 Clinical variables.....	8

4.7 Operational definitions	8
4.8 Data collection tools	9
4.9 Data collection procedure.....	9
4.10 Data quality management	9
4.11 Data processing and analysis	9
4.12 Dissemination of result	10
4.13 Ethical clearance	10
5: RESULTS	11
5.1 Socio-demographic characteristic.....	11
5.2 Causes of Each thyroid disorder	11
5.3 Common presenting symptoms of thyroid disorders	12
5.4 Complications associated with thyrotoxicosis	13
6:DISCUSSION	14
7. Limitation of the study.....	17
8. Conclusion	18
9. Recommendation	19
10.References.....	20
11.Annex	22
11.1. Check list on Clinical and Socio-demographic profile of patients with thyroid Disorder at the Endocrine clinic SPHMMC from June 2018- December 2018	22

List of tables

Table 1.Age distribution of patients with thyroid disorder at SPHMMC Endocrine clinic from June2018- December 2018.....	11
Table 2.Sex distribution of patients with thyroid disorder at SPHMMC Endocrine clinic from June 2018- December 2018.....	11
Table 3.Cause of each thyroid disorder at SPHMMC Endocrine clinic from June 2018- December 2018.....	12
Table 4.Common presenting symptom of thyroid disorders at SPHMMC Endocrine clinic from June 2018-December 2018.....	13
Table 5.Complications of thyrotoxic patients at SPHMMC Endocrine clinic from June 2018- December 2018.....	15

Abbreviations

AF-Atrial Fibrillation

CHF-Congestive Heart Failure

SPHMMC-Saint Paul Hospital and Millennium Medical College

TMNG- Toxic Multinodular Goiter

TA-Toxic Adenoma

TN-Toxic nodule

ABSTRACT

Back ground: Thyroid disorders represent an important public health problem worldwide ranking second to Diabetes as the commonest Endocrinological disorder seen in adult medical practice and presenting a myriad of devastating consequences if not treated early. Thyroid disorders have been reported in over 110 countries of the world where most are in developing countries. There are vast majority of clinical manifestation of patients with thyroid disorders ranging from primary manifestation of the illness itself to systemic complication of the disease and even death. All adult patients are at risk of developing thyroid disorder and causes may vary based on the disease type

Up-to-date there is no local information on the clinical and Socio-demographic profile of patients with thyroid disorders at the endocrine clinic of SPHMMC. This study will aid in providing information that will help in the improvement of the care that we are giving to our patient

Objective: Clinical and Socio-demographic profile of patients with thyroid hormone disorders at the Endocrine clinic of SPHMMC

Method and Materials: The study was conducted at Saint Paul Hospital Millenium Medical College (SPHMMC) Descriptive study design was used to assess the Clinical and Socio-demographic profile of patients with thyroid disorder at the Endocrine clinic of SPHMMC from June 2018-December 2018 by reviewing secondary data from charts. The data was analyzed using SPSS computer software version 25.

Results:-The Charts of 258 patients was obtained comprising of 188(72.76%) patients with Thyrotoxicosis and 70(27.1%) patients with hypothyroidism. 34(13.2 %) of the Thyrotoxic patients had systemic complication . The age group ranged from 15-71 with the mean age of 39.6 and Females accounted for 231(89.5%) and males accounted for the remaining 27(10.5%) of total patients. The commonest cause of thyrotoxicosis was Toxic Multinodular Goiter(TMNG) with 129 (70.1%) of patients followed by toxic nodule (TN) 37(20.1%) .In Hypothyroid patients the commonest cause was Iatrogenic, 45(64.3%) patients, followed by Idiopathic cause for 25(35.7%) patients. The commonest presentation of patients with thyrotoxicosis was palpitation (70.74%) and those of hypothyroid was fatigue (54.5%).

Conclusion and recommendation:-This study shows that the thyroid disorders at the Endocrine clinic are comprised of Thyrotoxicosis, which includes Hyperthyroidism, and Hypothyroidism. The patients included in the study have similar Socio-demographic and Clinical profile with those around the world. Further studies should be done to have more information about the disease pattern that will lead to better service provision.

1: INTRODUCTION

1.1. BACKGROUND INFORMATION

Thyroid hormones are essential for growth, neuronal development, reproduction and regulation of energy metabolism. Hypothyroidism and thyrotoxicosis are common conditions with potentially devastating health consequences that affect all populations worldwide. Iodine nutrition is a key determinant of thyroid disease risk.(1)The scope of thyroid hormone diseases that are frequently noted in Africa include hypothyroidism and thyrotoxicosis (which could be from hyperthyroidism or non-thyroid causes).(2)

Thyrotoxicosis is the clinical state associated with excess thyroid hormone activity, usually due to inappropriately high-circulating thyroid hormones. The clinical presentation varies, ranging from asymptomatic or subclinical, to life-threatening thyroid storm. Common clinical symptoms of thyrotoxicosis are heat intolerance ,sweating ,fatigue ,weakness ,weight loss with increased appetite,polyuria,hyperactivity,irritability,oligomenorrhea,loss of libido. (3)

Graves' disease is the most common etiology of thyrotoxicosis, followed by toxic multinodular goiter (TMNG) and toxic adenoma (TA).Thyrotoxicosis can present with serious complications, including ,Atrial fibrillation, congestive heart failure (CHF), thromboembolic disease, cardiovascular collapse, and death. Thyrotoxicosis peaks between ages 20 and 50 year. (4,5)

Hyperthyroidism is a condition that occurs due to excessive production of thyroid hormone by the thyroid gland(6). Signs and symptoms vary between people and may include irritability, muscle weakness, sleeping problems, a fast heartbeat , heat intolerance, diarrhea, enlargement of the thyroid, hand tremor, and weight loss. Graves' disease is the cause of about 50% to 80% of the cases of hyperthyroidism in the United States. Other causes include multinodular goiter, toxicadenoma, inflammation of the thyroid, eating too much iodine, and too much thyroid hormone.A less common cause is a pituitary adenoma. (7)

Hypothyroidism also called underactive thyroid or low thyroid is an endocrine disorder in which the thyroid gland does not produce enough thyroid hormone .In adults it is usually common above the age of 60.It can manifest with a number of symptoms such as poor ability to tolerate cold, feeling of tiredness, constipation depression and weight gain.(8)world wide the most

common cause of hypothyroidism is low iodine in the diet(9).less common cause include previous treatment with radioactive iodine, injury to hypothalamus or anterior pituitary gland, certain medications lack of functioning thyroid at birth and previous thyroid surgery(10)

1.2. STATEMENT OF THE PROBLEM

Thyroid hormone disorders are one of the Endocrinopathies across the world. It is well-known that thyroid disease is not a major cause of mortality. However, it does cause significant sequelae which lead to disability (11).

It is not uncommon to see patients with thyroid disorders in the endocrine clinic of SPHMMC. But up to date there is no study that shows who and what age group is affected, the common causes that are present, the features patients present with and the complication that is common in such patients. Knowing their clinical and socio-demographic characteristics will answer the above questions and it will also identify points of entry to provide better care as well as preventive measures.

1.3 Significance of the study

This study aims at description of the clinical and Socio-demographic profile of patients with thyroid hormone disorders. As to the knowledge of the investigator there was no such study done at SPHMMC so it will help as a stepping stone to do further studies based on its findings. It will also motivate physicians and other concerned bodies interested in the subject matter to conduct further investigations.

2: LITERATURE REVIEW

2.1 Socio-Demographic profile of patients of patients with thyroid disorder

Thyroid hormone disorders are one of the most prevalent Endocrinopathies across the world. It represents around 30% to 40% of the patients seen in an endocrine practice. (11). Over a billion people worldwide live in an iodine-deficient area, with the populations at greatest risk residing in remote mountainous regions, such as in Southeast Asia, South America and Central Africa. Population differences in iodine nutrition have a major role in the global prevalence of thyroid dysfunction. (12)

In a study that was conducted in GHANA ten thousand four hundred and eighty-four (10,484) thyroid cases were seen which was made up of 7584 females and 2936 males with a ratio of 3.5:1. Hypothyroidism and hyperthyroidism constituted 13.1%, 25.5% respectively. (12). In a study that was done in Nigeria, in Nigeria 175 patients were obtained comprising 151 (86.3%) females and 24 (13.7%) males (female to male ratio of 6.3:1) with age range from 18 to 76 years and mean age of 42.3 years. With clinical diagnosis, distribution of thyroid diseases was composed of hypothyroidism 3 (1.7%) and Hyperthyroidism, 65 (37%). The age group of 30–49 years had the highest prevalence of the thyroid diseases. (13)

In a cross-sectional study that was conducted to evaluate the Pattern, clinical presentations and management of thyroid diseases in national endocrine referral clinics, Tikur Anbessa Specialized Hospital from Nov 2009 to March the prevalence of Hyperthyroidism and hypothyroidism in 376 patients were 233 (61.7%) and 129 (34.3%) respectively. It was concluded that thyroid diseases were more common in females and more prevalent in age group of 40-49. (14)

2.2 Clinical profile of patients with thyroid disorder

Thyrotoxicosis is a common condition associated with excess circulating thyroid hormones that may present in myriad ways. Graves 'disease' is the most common cause, accounting for about 75% of cases. (15). Other important causes include toxic nodular hyperthyroidism, due to the presence of one or more autonomously functioning thyroid nodules, and thyroiditis caused by inflammation, which results in release of stored hormones. Several drugs, including amiodarone

,iodine, lithium, interferon α ,highly active retroviral therapy ,tyrosine kinase inhibitors, and levothyroxine can cause thyrotoxicosis in different ways.(12)

The presenting features of thyrotoxicosis are sometimes dramatic and characterized by the complications of the disease condition.. In a South African report, atypical features and complications of thyrotoxicosis such as cardiac complications myopathy and infiltrative eye diseases were noted more in black South Africans than the whites. It is instructive to note that thyrotoxicosis is a notable cause of cardiac morbidity in this part of the world. In a report from Togo, cardiac complications were documented in 46.6% of patients with thyrotoxicosis.The occurrence of heart failure was noted in 42% of subjects with thyrotoxicosis in Lagos Nigeria and in a Congolese report a smaller frequency rate of 12.6% was documented for thyrotoxic heart disease.(2)

A nationwide survey of the incidence of clinical thyrotoxicosis in Iceland was made during the three-year period 1980-1982.The total number of patients diagnosed as having thyrotoxicosis in the study period was 162,162..Graves' disease was by far the most common cause of thyrotoxicosis, 135 (83.3 %) of all 162 patients . Uninodular goiter was found in 11 patients (6.8 %), multinodular goiter in 10 (6.2 %) and thyroiditis associated with transient thyrotoxicosis in 6 (3.7%). (15)

One hundred and ten Ethiopian thyrotoxic patients were studied between February 1986 and January 1991 in a weekly endocrine clinic of Tikur Anbessa Teaching Hospital (TATH) in Addis Ababa, Ethiopia.Fifty three patients (48.2%) had Graves' hyperthyroidism, 37 (33.7%) toxic multinodular goitre (TMNG), 14 (12.7%) toxic adenoma, 4 (3.6%) Jodbasedow phenomenon and 2 (1.8%) had thyroiditis. The clinical presentation was similar to other reported series. (16).

In a prospective study done to determine Thyrotoxicosis in Ethiopian patients ,Forty-six cases of thyrotoxicosis, 8 males and 38 females, were seen over a period of two years from March 1979. There were 19 cases of toxic multinodular goiter, 22 of Graves' disease, four of toxic adenoma and one of subacute thyroiditis. The five most common symptoms were sweating/heat intolerance (82.6%), weight loss (82.6%), palpitations (82.6%), nervousness and irritability (73.9%) and insomnia (69.6. The five most common signs were goitre (97.8%), tachycardia (100.0%), sweating (84.7%), and fine finger and tongue tremors (89.1%). (17)

In a Prospective descriptive cohort study that was done to evaluate the Clinical presentation of hyperthyroidism in sample of outpatients in France a total of 1572 patients were included 1240 of whom were women(78.9%).The majority of patients had Graves' Disease,followed by multinodular goitre and toxic adenoma. Palpitations, weakness, temperature-related signs (heat intolerance, sweating, polydipsia) and disturbed sleep were the commonest.(18).similarly A Descriptive study was carried at a tertiary care hospital in India to know the clinical profile of patients with hyperthyroidism The most common presenting symptom was Palpitation (90%) followed by Tremulousness of hands (84%), anxiety (82%), weight loss (76%), and dyspnea (80.0%), and heat intolerance (78%), increased sweating (74%), and increased appetite (86%).(19)

Hypothyroidism is a common condition of thyroid hormone deficiency, which is readily diagnosed and managed but potentially fatal in severe cases if untreated (20).In iodine-replete communities, the prevalence of spontaneous hypothyroidism is between 1 and 2%. 85% of the cases of Hypothyroidism in Netherland are due to sporadic developmental defects of the thyroid gland while the remaining 15% have thyroid dyshormonogenesis defects transmitted by an Autosomal recessive mode of inheritance.(21)

A case control study was carried out at the Gandaki Medical College Teaching Hospital, Pokhara, Nepal, where 98 patients were identified as the cases of hypothyroidism. 28 (28.6%) patients had Hashimoto thyroiditis and 5 (5.1%) cases had sub acute thyroiditis while remaining 65 (66.3%) cases were idiopathic most probably iodine deficiency. The most common symptoms complained by our study population was lethargy; a hypothyroidism.81 females and 17 males. Cold intolerance, constipation, parenthesis, weight gain were other common symptoms according to descending order of frequency.(20).In a case control study that was carried out at the Punjab Institute of Nuclear Medicine (PINUM),Faisalabad, Pakistan there was a total of 394 patient,109 of whom was identified to have primary hypothyroidism . The commonest symptom complained by the patients was lethargy. (22).

3:OBJECTIVES

3.1 General objective

- To describe the Clinical and Socio-Demographic profile of patients with thyroid disorder

3.2 Specific objective

- To describe the Clinical profile of patients with thyroid disorder
- To describe Socio-Demographic profile of patients with thyroid disorder

4: METHODS AND MATERIALS

4.1 Study area and Study period

The study was conducted in the endocrine clinic of SPHMMC which is located in the northern part of the capital city of Ethiopia, Addis Ababa. SPHMMC was established in 2007 and currently gives health services in twelve departments(Internal medicine , Emergency and Critical Care Medicine ,Pediatrics and Child health ,Obstetrics and Gynecology Surgery , Radiology ,Ophthalmology ,Dermatology ,Psychiatry ,ENT ,Maxillofacial surgery, Forensic medicine)

The endocrine clinic provides service to estimated 2500-3000 patients yearly both from the capital city Addis Ababa and country side. Patients are followed by an endocrinologist, internist and medical residents .The study is done from June 2018-December 2018

4.2 Study design

Cross sectional study design was used.

4.3 Population

4.3.1 Source population

All adult Patients with thyroid disorder in endocrine clinic of SPHMMC from June 2018-December 2018

4.3.2 Study population

All adult Patients with thyroid disorder in endocrine clinic of SPHMMC from June 2018-December 2018

4.4 Inclusion and Exclusion criteria

4.4.1 Inclusion criteria- All adult patients with thyroid disorders

4.4.2 Exclusion criteria-Incomplete and missing cards

4.5 Sample size determination and Sampling technique

4.5.1The sample size can be determined by

$$n=(z_{\alpha/2})^2p(1-p)/d^2$$

n=sample size

$$z_{\alpha/2}=1.96$$

p=prevalence of thyroid disorder (50%)

d=marginalized error which is 0.05(5%) ,

Confidence interval=95%

n=384.16

Since the population is less than 10, 000, we use finite population correction

$$n_f = \frac{n_0 * N}{n_0 + N - 1}$$

Where n_f = corrected sample size

n_0 = minimum sample size

N = total population

Therefore, $n_f = 384 * 638 / 384 + 638 - 1 = 240$

With addition of 10%=264

4.5.2 Sampling technique:

All patients with thyroid disorder from June 2018-December 2018 were taken

4.6 Study Variables

4.6.1 Socio-Demographic variables:-**Age, Sex, Area of residence**

4.6.2 Clinical variables:-,Causes of Each thyroid disorder, Presenting symptom of thyroid

disorders ,complication of patients with thyrotoxicosis

4.7 Operational definitions

Thyroid disorders =Hypothyroidism, Hyperthyroidism, and Thyrotoxicosis

Hypothyroidism=increased level of thyroid hormone from the upper normal limit of the laboratory reference level of TSH and Lower level of thyroid hormones below the lower normal limit of the laboratory

Hyperthyroidism=Decreased level of thyroid stimulating hormone below the lower normal limit of the laboratory and Elevated levels of thyroid hormones above the upper normal limit of the laboratory from due to increased activity of the thyroid gland

Thyrotoxicosis= Excess amount of thyroid hormone in the blood circulation due to increased activity of thyroid gland or other sources

Adults=Age of 15 years of age and above

Complications=Systemic manifestation of thyrotoxic patients

Idiopathic=a disease where the cause is not determined

4.8 Data collection tools

A check list was used to collect data after modifications consisting of two parts. Part One consists of Socio-demographic data and Part Two consists of clinical profile of patients with thyroid disorder.

4.9 Data collection procedure

Data was collected manually using a check list. The data was collected by trained data collectors (Residents). The charts of the study were collected and received after cross checking chart number on the chart with that on the registration book. Data was filled by the data collectors in to the check list.

4.10 Data quality management

The Data was checked for completeness and consistency daily by the investigator. The quality of data was further ascertained during the data entry and cleaning process. The check list was pretested by considering 5 %(14), pretest was conducted two weeks before Actual data collection to check its variability and the check list was assessed for its clarity, length and completeness and the necessary correction was done accordingly. Charts used for pretest were also excluded from the study

4.11 Data processing and analysis

The data collected was cleared, categorized and analyzed. The collected data was entered into a computer using Statistical package for social Science (SPSS) version 25.The data was summarized and described using tables .Descriptive statistics was used to put result of the study in the form of findings and percentages.

4.12 Dissemination of result

Finally the results of the research will be reported to all concerned bodies and placed in the library of SPHMMC. The findings will be presented to staffs and students of SPHMMC. It will also be published.

4.13 Ethical clearance

Ethical clearance and permission letter was obtained from the Institutional Review Board (IRB) of Saint Paul's Millennium Medical Collage to conduct this study.

5: RESULTS

5.1 Socio-demographic characteristic

The lowest age of patients in the study was 15 and highest age was 71 with the mean 39.6 and median of 38 most of the patients are in the age group of 15-55, followed by age groups >55 which accounts accounted for 38(14.5%). The sex distribution includes 231(89.5%) females and 27 (10.4%) male with female to male ratio of 8.5:1. Most of the patients came from the capital city Addis Ababa which account for 159(61.6%) of patients. Patients from Oromia Region were 77(29.8%), Amhara Region were 12(4.6%) and Southern Nation, Nationalities and People region were 10(3.8%) .(Table 1)

Age	Range	Frequency	Percent
	15-55	220	85.2%
	>55	38	14.5%
sex	Male	27	10.5%
	Female	231	89.5%
Area of residence	Addis Ababa	159	61.6%
	Oromiya	77	29.8%
	Amhara	12	4.6%
	Sothern nation ,nationalities and people	10	3.8%

Table 1: Socio- Demographic characteristics of patients with thyroid disorder at SPHMMC Endocrine clinic from June 2018-december 2018

5.2 Causes of Each thyroid disorder

From the total of 258 patients with thyroid disorders 188(73%) were thyrotoxic and 70(27.1%) were Hypothyroid. Most of the Hypothyroidism, (64.3% 45) patients, is caused by iatrogenic cause while the rest, 35.7% (25) patients have Idiopathic causes. There were two causes of thyrotoxicosis where 184 patients (98%) had thyrotoxicosis secondary to hyperthroidisim and 4(2%) patients had other causes (Drug and thyroiditis). In patients with hyperthyroidism the leading cause is TMNG(68.6%) followed by toxic nodule(19.6%).(Table 2)

Thyroid disorder		Cause	(%)
Hypothyroidism		Iatrogenic	45(64.3%)
		Idiopathic	25(35.7%)
Thyrotoxicosis	Hyperthyroidism	T MNG	129 (68.6%)
		T Nodule	37 (19.6%)
		Autoimmune	14(7.4%)
		Gestational Thyrotoxicosis	4(2.1%)
	Other causes	Thyroiditis	3(1.5%)
		Drugs	1(0.5%)

Table 2: Cause of each thyroid disorder at SPHMMC Endocrine clinic from June 2018-December 2018

5.3 Common presenting symptoms of thyroid disorders

The commonest presenting symptom of patients with hyperthyroidism is fatigue which accounts for 36 of patients (54.5%), followed by amenorrhea, 4 patients (6.1%), and hoarsens of voice 3 patients (4.5%).The other presenting symptoms account for lesser percentage ranging from .In thyrotoxic patients palpitation was the commonest manifestation accounting for 133(70.74%) of patients (70.8 %), followed by hot intolerance where 23 of patients (122.3%) presented with. Other presenting symptoms like easy fatigability, weight loss and excessive sweating accounted for lesser percentage.(Table 3)

Thyroid disorder	Presenting symptoms	(%)
Hypothyroidism	Fatigue	36(54.5%)
	Hoarseness of Voice	3(4.5%)
	Amenorrhea	4(6.1%)
	Cold Intolerance	12(18.2%)
	Headache	1(1.5%)
	Infertility	2(3%)
	Weakness	1(1.5%)
	Palpitation	1(1.5%)
	Abnormal Uterine Bleeding	1(1.5%)
	Neck Swelling	1(1.5%)
	Constipation	1(1.5%)
	Sleepiness	1(1.5%)
	Loss of Appetite	1(1.5%)
	Neck Pain	1(1.5%)

Thyrotoxicosis	Palpitation	133(70.74%)
	Hot Intolerance	23(12.23%)
	Easy Fatigability	6(3.19%)
	Weight Loss	3(1.59%)
	Excessive Sweating	7(3.72%)
	Shortness of Breath	2(1.06%)
	Infertility	2(1.06%)
	Amenorrhea	1(0.53%)
	Leg Weakness	1(0.53%)
	Anterior Neck Pain	1(0.53%)
	Tremor	1(0.53%)
	Eye Protrusion	4(2.12%)
	Fatigue	1(0.53%)
	Shortness of Breath	2(1.06%)
	Body Swelling	1(0.53%)

Table 3: Common presenting symptom of thyroid disorders disorder at SPHMMC

Endocrine clinic from June 2018-december 2018

5.4 Complications associated with thyrotoxicosis

In patients with thyrotoxicosis 30 of them had complications. Eye complication known as Graves Ophthalmopathy occurred in 11(36.7%) patients. The next common complications are cardiac complication consisting of heart failure, 9 patients (30%) and Atrial fibrillation, 8 patients (26.7%). (Table 4.)

Thyrotoxicosis complication	Type of complication	Frequency
	Atrial Fibrillation	8(26.7%)
	Heart Failure	9(30%)
	Grave's Ophthalmopathy	11(36.7%)
	Afib + Heart Failure	2(6.7%)

Table 4: Complication Thyrotoxic patients at SPHMMC Endocrine clinic from June 2018-December 2018

6:DISCUSSION

This study is the first study done to describe the Clinical and Socio-demographic profile of patients with thyroid disorders. From the total of 258 patients seen in the endocrine clinic of SPHMMC from June 2018-December 2018. Thyrotoxicosis accounted for most of the cases of the patients while the rest were diagnosed with Hypothyroidism. The sex distribution shows the predominant involvement of female gender in the spectrums of the disease. In similar studies this phenomenon is explained by the interaction of the female reproductive system with the thyroid function. (22). The age range of patients was from the teenagers to old age people. Similar results were seen in terms of the age and sex distribution of the disease in studies that were done in Ghana, Nigeria and Tikur Anbessa Specialized hospital Addis Ababa, even though the study periods were longer and had more patients than this study (12,13,14). Most of the patients are from the capital city Addis Ababa and Oromia region, due to the catchment area of service of the hospital.

In identifying the cause of each thyroid disorder the most common cause of Hypothyroidism in the study was of iatrogenic Origin. This can be due to one of the anticipated complications of thyroid surgery where total or subtotal thyroid removal is done which leaves inadequate thyroid tissue for adequate hormone production leading to transient or persistent Hypothyroidism. The other explanation can be a weak hormonal profile follow up of patients after surgery due to either lack of consistency of following physicians, economical restraint of patients to do investigation, absence of patients from their follow-up since the primary problem is corrected and non adherence of patients to their hormonal supplements if they are started on one. Patients should be counseled for the possibilities of hypothyroid symptoms and to adhere to thyroid supplements if they are started on them. If these are not done patients can present with signs and symptoms of Hypothyroidism. The other cause is classified as Idiopathic where the cause is not known which accounts for . This can be explained by investigational limitations as well as less effort to look for other causes. Similarly A case control study in Nepal also showed most of hypothyroid patients to have idiopathic cause in which was attributed to possible iodine deficiency where the remaining had Hashimoto's thyroiditis and sub acute thyroiditis (20). In Netherland most cases of hypothyroidism were caused by sporadic developmental defects of the thyroid gland. While the remaining have thyroid dyshormonogenesis defects transmitted by an Autosomal recessive

mode of inheritance.(21)In a study that was done on epidemiology of thyroid disorder worldwide, congenital hypothyroidism iodine deficiency were the most common causes of hypothyroidism.(12)This causes have not been clearly identified in our study. The reason considered is the lack of nutritional assessment history in our clinical practice where most of the patient lack information about iodine status of their area of residence. There is also a lesser habits of bringing patients who may have congenital hypothyroidism to health facilities due to the lack of information that Hypothyroidism can cause mental retardation as a complication of congenital hypothyroidism.

Thyrotoxicosis had two causes which were broadly classified as those caused by Hyperthyroidism and those caused by non thyroidal causes termed as other causes which includes drugs and thyroiditis(inflammation of the thyroid gland.)From the causes of hyperthyroidism Toxic multinodular goiter (TMNG) was the leading cause followed by Toxic nodule (TN) with and Autoimmune cause which is similar in the studies done in France ,Iceland and Tikur anbessa hospital.(18,15,16,17) From this it is observed that most of the causes are primary causes, Secondary causes like pituitary and/or hypothalamic tumors and ectopic secretion of Thyroid stimulating hormone remain to be under diagnosed in our hospital. The reason for this can be diagnostic limitation or lesser interest of diagnosing patients further once they are known to have Hyperthyroidism.

In assessing the most common presenting symptoms of each thyroid disease, fatigue and cold intolerance were the commonest presenting symptoms of those with hypothyroidism which is similar in the finding of the study done in Nepal (20).In cases of thyrotoxicosis the commonest presenting symptom are palpitation, hot intolerance and excessive sweating which were the presentations of patients in France and Nepal studies (18, 20). Symptoms like irritability and insomnia were not common to see in our case were they were common in a study that was done in black lion hospital Addis Ababa (16,17).This could be due to underreporting of patients or under questioning of the physicians. The other presenting symptoms were similar.

Thyrotoxicosis can present with serious complication when not diagnosed and treated appropriately, including delirium, altered mental status, osteoporosis, muscle weakness, Atrial fibrillation, congestive heart failure (CHF), thromboembolic disease, cardiovascular collapse, and death.(6) In this study 34 of patients with thyrotoxicosis had complication and the leading

complication was an eye disease known as Graves Ophthalmopathy .The other complications were cardiovascular complication composed of Atrial fibrillation and heart failure where some patients presented with the individual diseases and others with combined presentation of heart failure and Atrial fibrillation .These findings indicate that the systemic complications that are found in the study are part of the expected complication with thyrotoxicosis. In a South African study of patients with thyrotoxicosis it was found that infiltrative eye disease and cardiac complication were more common in blacks than whites. In studies done in Lagos Nigeria and Congo cardiac complication were common.(2)Our findings can be supportive of this even if it was not done in comparison in whites ,Since we represent black population.

7. Limitation of the study

It has limited Clinical and Socio-Demographic information of patients, it was done in one center and chart review resulted in lack of some information that could have been an input to the study.

8. Conclusion

This study shows that thyroid disorders consist of thyrotoxicosis, which includes hyperthyroidism, and hypothyroidism where thyrotoxicosis predominates. Females and age groups less than 55 are involved predominantly.

9. Recommendation

1. Clinicians should participate in providing further information on the disease entity by asking detailed history during patients visit.
2. Health education should be provided especially for women and those aged 15-55 since they are most affected by the disease .
3. Complications of patients should be sought at each visits in patients with thyrotoxicosis
4. Collaborative work should be done with surgical department since most causes of hypothyroidism are iatrogenic causes.

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11. Annex

11.1. Check list on Clinical and Socio-demographic profile of patients with thyroid Disorder at the Endocrine clinic SPHMMC from June 2018- December 2018

Part 1 Socio-demographic Data

1. Chart No. _____
2. Age _____
3. Sex: ☐ 1. Male
☐ 2. Female
4. Area of residence ☐ 1. Addis Ababa
☐ 2 Other (specify) _____.

Part 2 Clinical profile of patients

5. Type of thyroid disorder
☐ Hypothyroidism
☐ Hyperthyroidism
☐ Thyrotoxicosis
6. If Hypothyroid
 - 6.1 TSH at diagnosis _____
FT4 at diagnosis _____
FT3 at diagnosis _____
 - 6.2 What is the cause? _____
7. If Hyperthyroid
 - 7.1 TSH at diagnosis _____
FT4 at diagnosis _____

FT3 at diagnosis _____

7.2 What is the cause? _____

8. If Thyrotoxicosis

8.1 What is the cause? _____

8.2 What complications are present? _____