

Clinical presentation of hypothyroidism which depends on initial dosage among hypothyroidism patient in hail city.

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Background: There are no enough studies that focus on the Clinical presentation of hypothyroidism which depends on initial dosage among hypothyroidism .**Objective:** To recognize Clinical presentation of hypothyroidism which depends on initial dosage among hypothyroidism patient in hail city .**Methodology:** A Cross- Sectional based study conducted at King Khalid Hospital in Hail city, Saudi Arabia. Data were collected through personal structured interviews after informal consents from the patients. Data was entered and analyzed by Statistical Package for Social Software Program (SPSS) version 14.**Result:** From 420 questionnaires 400 were collected and analyzed. The predominant gender respondents were female 380 (92%) and the mean age was more than 42% they were more than 40 years (168 pt). The top three clinical presentation were (27 %) of patients suffering from Fatigue and tiredness ,(16 %) of patients are suffering from increased their weight ,14% they suffering from hair loss. (40%) started with 50 micro/gram as initial dosage .

Conclusion: Findings showed 40 % started with 50 micro/gram as initial dosage (30.2 % Fatigue and tiredness , overweight 18.1% , hair loss 15.5%) 53% good prognosis and 47% poor prognosis main of them need to increased the initial dosage So we think it is important to help them by a educated the correct way how use the hypothyroids medication and follow the doctors instruction .

1/Hail university Saudi Arabia . 2/ King Abdulaziz university

I. (INTRODUCTION):-

a disorder that occurs when the thyroid gland does not make enough thyroid hormone to meet the body's needs. Thyroid hormone regulates metabolism—the way the body uses energy—and affects nearly every organ in the body. Without enough thyroid hormone, many of the body's functions slow down. The kingdom of Saudi Arabia is one of the top countries in the prevalence of hypothyroidism The symptoms of hypothyroidism tend to develop slowly. They can be different from case to case. Initial symptoms include slight fatigue and sluggishness. Increased sensitivity to cold, Constipation , dry skin, Puffy face ,Hoarse voice, Elevated blood cholesterol, Unexpected weight gain, Muscle aches, cramps, tenderness or stiffness ,Pain, stiffness or swelling in your joints, Heavier than normal menstrual periods in women, Depression ,Visibly enlarged thyroid, Brittle hair and fingernails ,Forgetfulness. There can be many reasons why the cells in the thyroid gland can't make enough thyroid hormone. Here are the major causes, from the most to the least common: Autoimmune disease (Autoimmune thyroiditis),Surgical removal of part or all of the thyroid gland ,Radiation treatment. Some people with Graves' disease, nodular goiter, or thyroid cancer are treated with radioactive iodine (I-131) for the purpose of destroying their thyroid gland. Patients with Hodgkin's disease, lymphoma, or cancers of the head or neck are treated with radiation. Congenital hypothyroidism, Thyroiditis. Thyroiditis is an inflammation of the thyroid gland, usually caused by an autoimmune attack or by a viral infection ,,Medicines. Medicines such as amiodarone, lithium, interferon alpha, and interleukin-2 can prevent the thyroid gland from being able to make hormone normally.

Risk Factors

About 15 million Americans have unrecognized thyroid disease, mostly subclinical hypothyroidism (mildly underactive thyroid). Less than 2% of the U.S. population has full-blown hypothyroidism.

Women. Women have 10 times the risk of hypothyroidism as men, with the difference being significant after age 34. Because the symptoms of hypothyroidism and menopause are so similar, hypothyroidism may easily be missed.

Age. The risk for hypothyroidism is greatest after age 50 and increases with age. However, hypothyroidism can affect people of all ages.

GENETIC DEFECTS.

SMOKING

Smoking significantly increases risk for thyroid disease. **MEDICAL CONDITIONS ASSOCIATED WITH HYPOTHYROIDISM**

People with certain medical conditions have a higher risk for hypothyroidism. These conditions include:

Autoimmune diseases. People with many autoimmune diseases have a higher risk for hypothyroidism. Type 1 (insulin-dependent) diabetes poses a higher risk and is a special problem since hypothyroidism can affect insulin requirements. Women with other autoimmune diseases, including systemic lupus erythematosus, pernicious anemia, and rheumatoid arthritis, are also at higher risk for hypothyroidism. Pregnant women with autoimmune conditions have a 25% risk for hypothyroidism during gestation. Standard treatment for hypothyroidism involves daily use of the synthetic thyroid hormone levothyroxine (Levothroid, Synthroid, others). This oral medication restores adequate hormone levels, reversing the signs and symptoms of hypothyroidism.

II. PROBLEM STATEMENT AND RESEARCH JUSTIFICATION:

* Hypothyroidism is one of the most prevalent diseases in Saudi Arabia especially in hail city with data showing the significant increase in the prevalence of hypothyroidism recently.

* Bone aches and infertility are the major complications of hypothyroidism

* The majority of hypothyroidism patients were females. To be more specific (married females 40 years old and above)

* The research s conducted among hypothyroidism patients attending the endocrine clinic . As they represent a reachable group they can act as a focal group to increase the awareness of the rest of population in the state of properly educated .

* The findings of the study can be used for the future planning of health education programs on the investigated areas .

III. STUDY OBJECTIVES:

2.1. General Objectives:

Clinical presentation of hypothyroidism which depends on initial dosage among hypothyroidism patient in hail city

2.2. Specific Objectives :

1) To measure the prevalence of hypothyroidism disease among hypothyroidism patients attending the endocrine outpatient clinics at King Khalid Hospital.

2) To assess rate of occurrence of hypothyroidism complications among hypothyroidism patients attending the endocrine outpatient clinics at King Khalid Hospital

3) To evaluate the level of awareness of hypothyroidism patients attending the endocrine outpatient clinics at King Khalid Hospital about the proper care of hypothyroidism.

IV. METHODOLOGY:

4.1. Study design:

Cross-sectional facility-based study design

4.2. Study Area:

King Khalid Hospital is the major public hospital in Hail State and is located in Hail city which the capital of the state. It is the major referral hospital for tertiary medical care in the area. It provides educational opportunities to the medical students, nursing students and paramedical careers training.

4.3. Study population:

All hypothyroidism patients attending the endocrine outpatient clinics during the data collection period in King Khalid Hospital.

4.4. Sample size:

Required sample size calculated based on a confidence level of 95% ($z = 1.96$), expected proportion from a similar study in Kenya was 4.6% (we could not get diabetic septic foot estimated prevalence in the KSA), an accepted error of 5%. Then using the equation: $s = \frac{z^2(p(1-p))}{e^2}$, $s = 67.428$ therefore. 68 patients.

Depending on the endocrine clinics statistical records, it was expected to get this sample size in three months of total outpatients' attendants' coverage.

4.5. Sampling procedure:

Sequential sampling was done. Sample collected through total coverage of the study population between 5th of RAJAB and 28th of RAMADAN1437A.H. 420 patients attended the endocrine outpatient clinics and 400 patients were interviewed with a non-response rate of 1.6%.

4.6. Study variables:

The study variables include:

1-3 Demographic variables: gender , age, relationship status

- 4 The time of the diagnosis .
- 5 Clinical presentation
- 6 The occurrence of complication
- 7 Improvement after drug use
- 8 The amount of the Therapeutic dose
- 9 Family history of hypothyroidism
- 10 Any chronic diseases

4.7. Methods of data collection:

Data collected through personal structured interviews using questionnaires.

4.8. Data collection and processing:

Three students interviewed the sampled patients after introducing themselves, describing the study and taking permission. Data collected on questionnaires.

4.9. Data analysis and interpretation of results:

Data were analyzed by the computer using SPSS software.

4.10. Study period

Rajab- Ramadan 1437 A.H.

4.11. Ethical consideration:

Verbal consent taken from all participants. confidential handling and management of the collected data. Names of the participants were not asked for.

V. RESULT

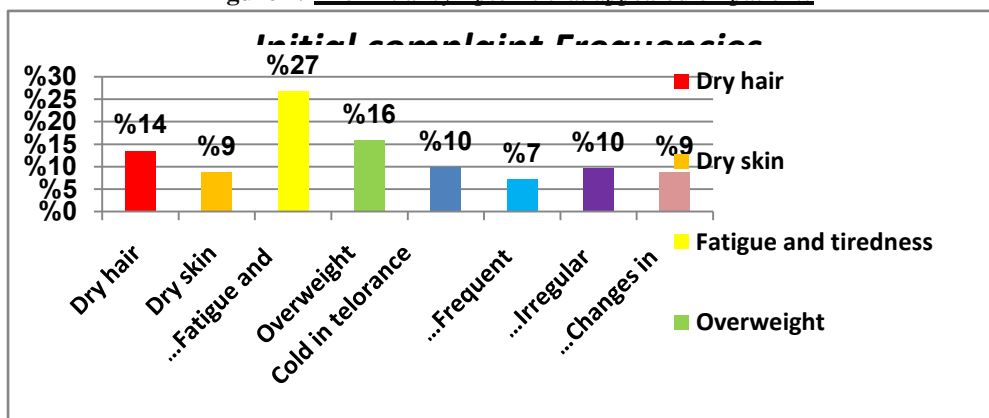
From 420 questionnaires 400 were collected and analyzed. The predominant gender respondents were female 380 (92%) male patients were (8%). the mean age was more than 42% they were more than 40 years (168 pt). The top three clinical presentation were (27 %) of patients suffering from Fatigue and tiredness ,(16 %) of patients are suffering from increased their weight ,14%they suffering from hair loss. irregular menstrual and constipation 10%, dry skin and psychological disturbance 9%.

(40%)from them started with 50 micro/gram as initial dosage.

And we found in our research initial dosage for 40% from our patient started with 50micro/gram . (30.2 % suffering from Fatigue and tiredness , overweight 18.1% , hair loss 15.5%), 24% started with 100 micro/gram as initial dosage (18.9 % Fatigue and tiredness , overweight 12.9 % , hair loss 11%), 21%for patient who received 75 micro /gram of thyroxin as initial dose (18.1 % Fatigue and tiredness , overweight 7.1 % , hair loss 6.6%), patient who received 125 micro /gram of thyroxin as initial dose

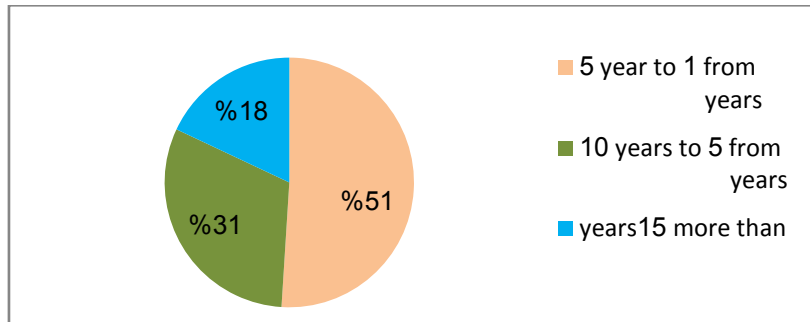
(11.3% Fatigue and tiredness , overweight 8.4 % , hair loss 6.6 %)

Figure 7: The initial symptoms that appeared on patients



majority of the initial compiling : 27 % of patients suffering from Fatigue and tiredness ,while16 % of patients are suffering from increased their weight ,14%they suffering from hair loss.

Figure 6 : It began diagnosing patients

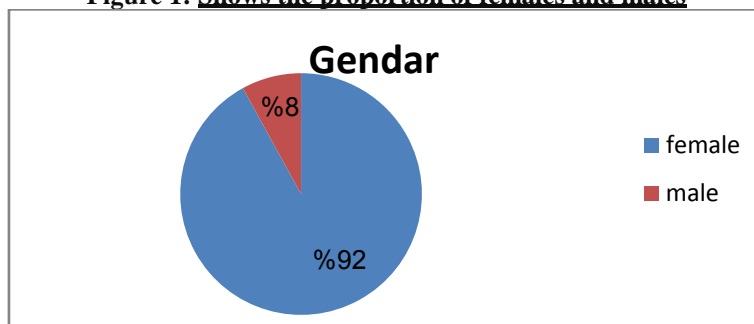


Distribution of the studied group in King Khalid Hospital according to the duration of their hypothyroidism rajab-ramadan 1437h.

The table shows that the majority of study subjects are known hypothyroidism for 1 year to 5 years

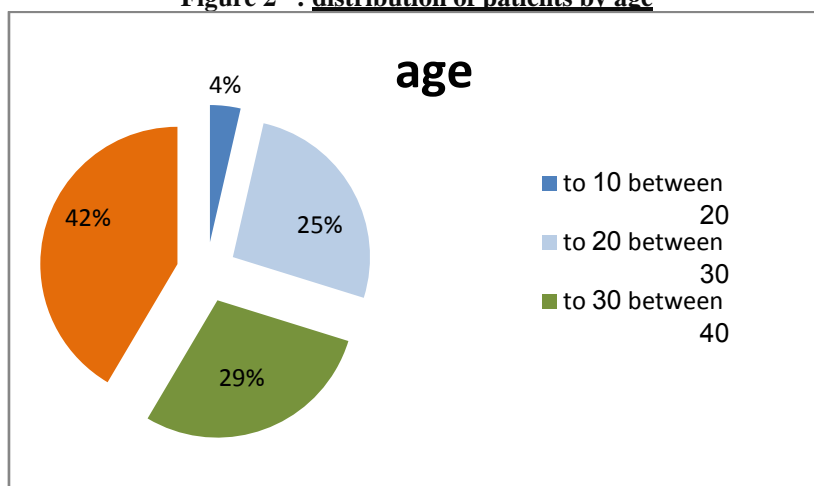
51% began the diagnosis , from 5 years to 10 years, 31 % began the diagnosis , more than 15 years 18% began the diagnosis .

Figure 1: Shows the proportion of females and males

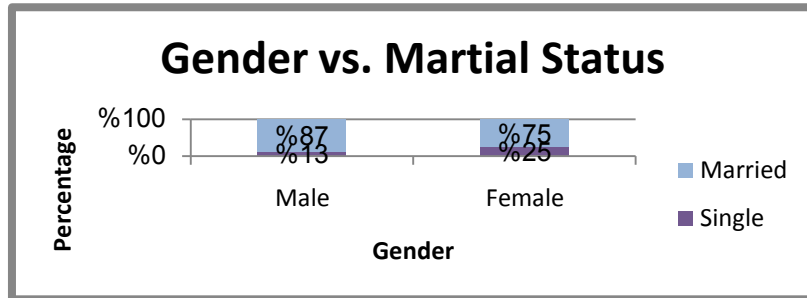


A total of 400 patients participated in the survey. The predominant gender respondents were female 371 (92%) and the mean age was more than 42% they are more than 40 years were 168 pt.

Figure 2 : distribution of patients by age

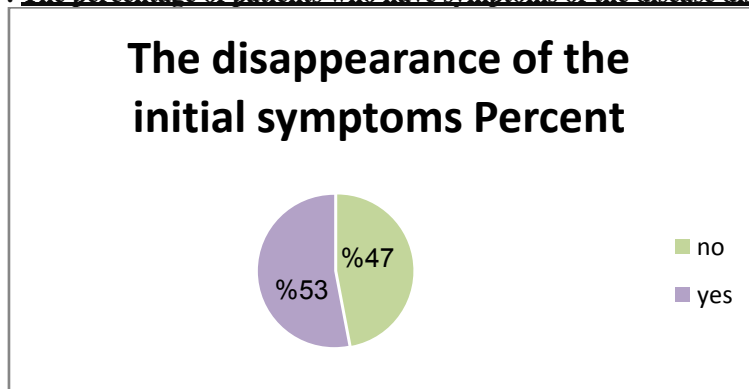


This table shows number of the studied group fall in the age groups (10-20) years (4%), (16)pt and (20-30) years (25%) respectively (100)pt, (30_40)years (29%)(116)pt, more than 42% they are more than 40 years were 168 pt. Most of them are female.



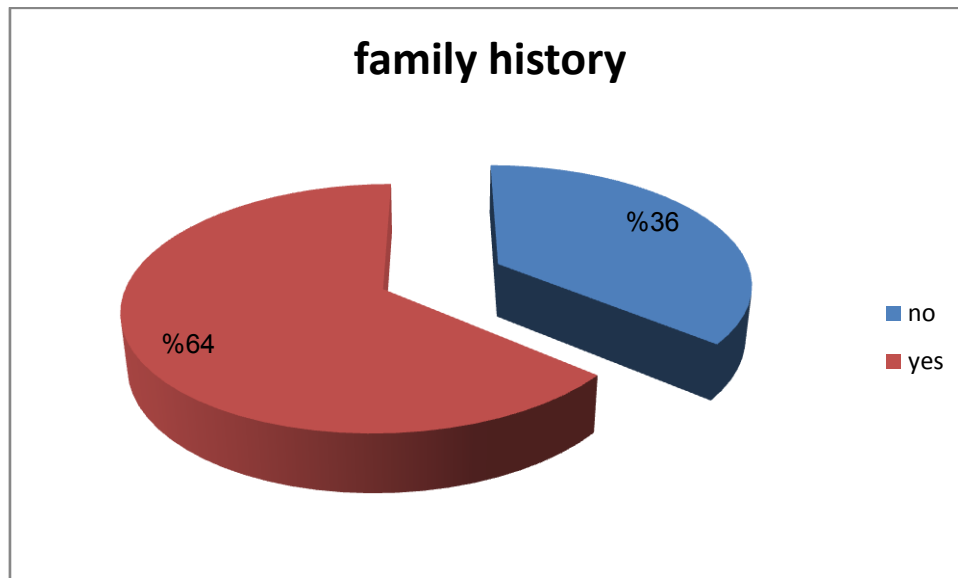
This table shows that (75% were married ,25% were single) from total number of females patient which was 368 ,while 87% were married ,13% were single from total number of male patient.

Figure 9 : The percentage of patients who have symptoms of the disease disappeared



This figure shows that 53% good prognosis and 47% poor prognosis .

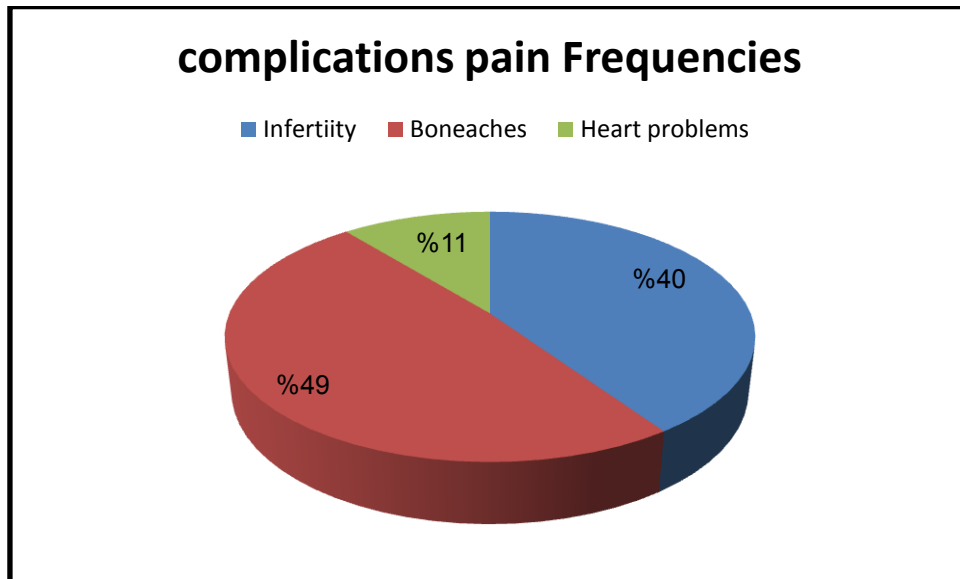
figure 11 : The percentage of patients who have similar symptoms appeared in their families



This table shows that those having a current history of family history of hypo-hyperthyroidism

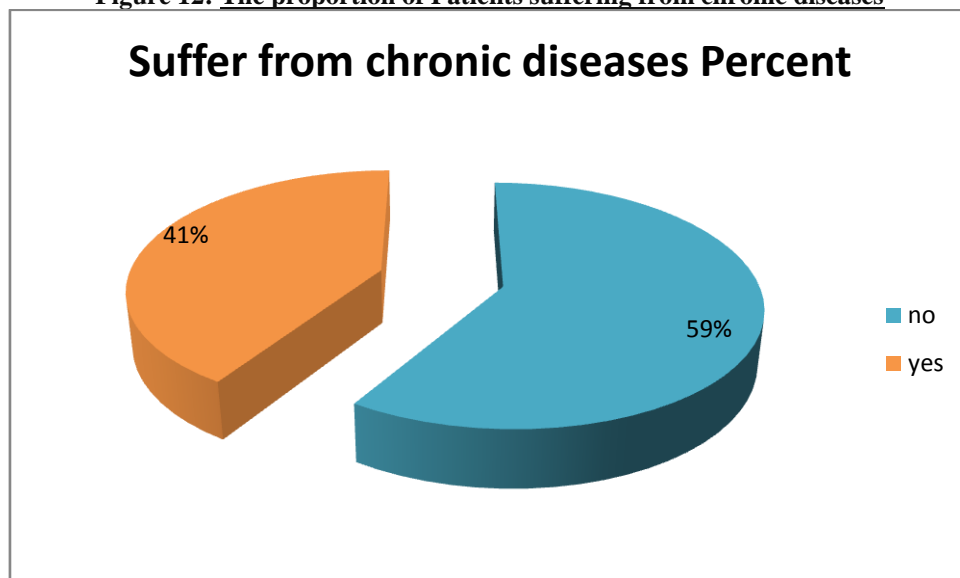
64 % (256 pt) , of patients experienced the same problem when their families 36% (144 pt) of patient no similar attack in their family.

Figure 8 : complications of the disease



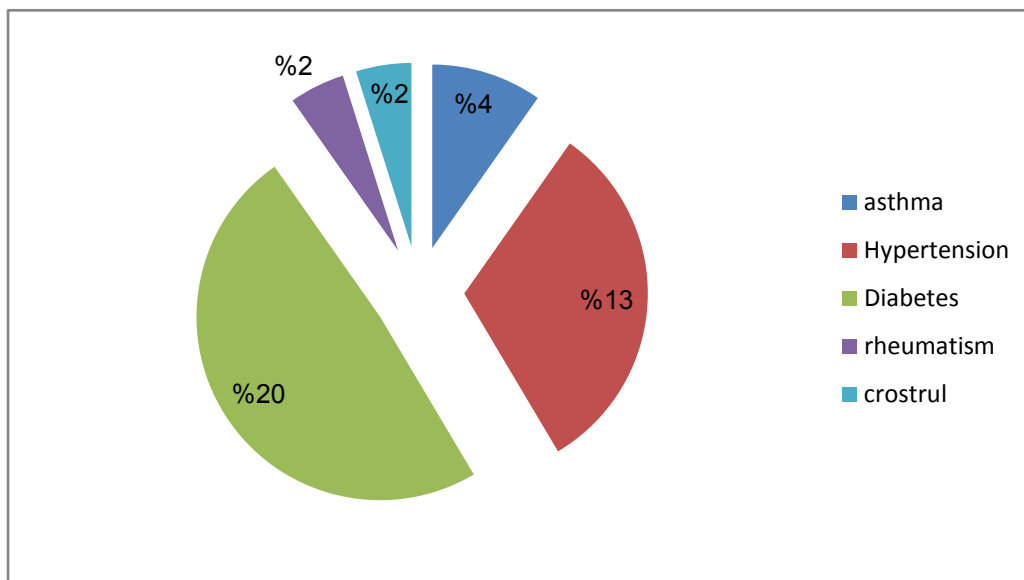
This figure shows of the studied hypothyroidism patients have undergone,49 % of the petients suffering from Boneaches,40% of the petients suffering from Infertiiti,11% of the petients suffering from Heart problems which were present after diagnosed.

Figure 12: The proportion of Patients suffering from chronic diseases



41% they had history of chronic disease as compared to 59% did not have history of chronic disease

Figure 13 :history of the chronic diseases



The most common chronic diseases associated with hypothyroidism 20% from the Patients suffering from Diabetes While 13% suffering from Hypertension 13% .

	\$first_bign ^a								Total
	hair loss	Dry skin	Fatigue tiredness	Cold intolerance	increases	irregular period	Changes in psychological and strikes	constipation	
50 micro / gram	15.5%	10.8%	30.2%	11.3%	18.1%	10.2%	10.2%	8.4%	40.9%
75 micro / gram	6.6%	3.9%	18.1%	5.2%	7.1%	5.0%	3.9%	3.9%	21.0%
100 micro / gram	11.0%	7.9%	18.9%	7.3%	12.9%	9.2%	7.3%	5.0%	24.7%
125 micro / gram	6.6%	3.4%	11.3%	5.0%	8.4%	3.7%	3.9%	3.4%	13.4%
	39.6%	26.0%	78.5%	28.9%	46.5%	28.1%	25.5%	20.7%	100.0%

Clinical presentation for patient who received 0 micro /gram of thyroxin as initial dose (30.2 % Fatigue and tiredness , overweight 18.1% , hair loss 15.5%)

Clinical presentation for patient who received 75 micro /gram of thyroxin as initial dose

(18.1 % Fatigue and tiredness , overweight 7.1 % , hair loss 6.6%)

Clinical presentation for patient who received 100 micro /gram of thyroxin as initial dose

(18.9 % Fatigue and tiredness , overweight 12.9 % , hair loss 11%)

Clinical presentation for patient who received 125 micro /gram of thyroxin as initial dose

(11.3% Fatigue and tiredness , overweight 8.4 % , hair loss 6.6 %)

VI. DISCUSSION:

In this study, The predominant gender respondents were female 380 (92%) male patients were (8%), (75% were married ,25% were single) from total number of females patient which was 368 ,while 87% were married ,13% were single from total number of male patient . the mean age was more than 42% they were more than 40 years (168 pt) . ,about 116 patient their age(30_40)years(29%)and patients age between (20-30) years (25%) respectively (100)pt.the group age between (10-20) years (4%).

The top three clinical presentation were (27 %)of patients suffering from Fatigue and tiredness ,(16 %) of patients are suffering from increased their weight ,14%they suffering from hair loss. irregular menstrual and constipation 10%, dry skin and psychological disturbance 9%.

64 % (256 pt) , of patients experienced the same problem when their families

36% (144 pt) of patients they didn't have .

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(11.3% Fatigue and tiredness , overweight 8.4 % , hair loss 6.6 %).

VII. CONCLUSION:

This study done in King Khalid Hospital in Hail during Rajab-Ramadan1437. It showed the following results about the interviewed hypothyroidism patients:40 % started with 50 micro/gram as initial dosage (30.2 % Fatigue and tiredness , overweight 18.1% , hair loss 15.5%) 53% good prognosis and 47% poor prognosis main of them need to increased the initial dosage So we think it is important to help them by a educated the correct way how use the hypothyroids medication and follow the doctors instruction.

VIII. RECOMMENDATIONS:

1. There is a need to extensively investigated the causes of the high reported for initial clinical presentation of Hypothyroidism ..
2. There should be more focus on promotion of proper hypothyroidism practices; health promotion campaigns should be designed and implemented. Further studies are needed to deeply investigate the issues.

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