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A PROSPECTIVE STUDY OF CLINICAL PROFILE OF HYPOTHYROID PATIENTS ATTENDING TERTIARY CARE HOSPITAL

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Abstract

Introduction: Hypothyroidism is a common endocrinal disorder. Crude prevalence of hypothyroidism is 31.1/1000 population and the overall crude incidence is 7/1000 population1. Hypothyroidism may present with variety of clinical features like lethargy, dry skin, hair loss, cold intolerance, constipation, weight gain, menstruation irregularity, edema, hoarseness of voice, goiter, myopathy, paresthesia. On the basis of presence or absence of clinical features hypothyroidism can be classified as clinical and subclinical hypothyroidism respectively.

Materials and Methods: A hospital based prospective study were carried out in different wards of Department of General Medicine, Jagityal Medical College and Govt General Hospital, Jagityal, Telangana and total 200 patients were included in this study. The duration of the present study was one year and proper consent was taken from the institutional ethics committee. All the cases in this study were examined according to a clinical plan and investigated as the per need. Laboratory test which included FT4, FT3, TSH, complete blood count, renal function test, liver function test, lipid profile, blood and sugar were done. Specific investigation like ECG, Echocardiography, Chest X-Ray was also advised accordingly.

Results: In present study, total 200 patient of hypothyroidism were evaluated out of these 136 (68%) were female and 64 (32%) were male. Male to female ratio in this study was 2:1. The maximum number of patients was in the age group of 31 to 40 years. 6 (3%) cases were above the age of 71 years. The most common symptoms were weakness 184 (92%), Dryness of skin 152(76%), weight gain 128(64%), Facial puffiness 108(54%), constipation 96(48%), Menstrual irregularities 88(44%), Hoarseness of voice (36%), Chest Pain (32%), Anorexia (32%), Cold Intolerance (26%), Thyroid Swelling (23%), Falling of hair (18%) whereas most common Sign were pedal oedema 86 (43%), Hypertension 80 (40%), Dyspnoea 60(30%), Bradycardia 44(22%), Pallor 40(20%), and Delayed ankle reflexes 36 (18%).

Conclusion: Routine screening of patients with signs and symptoms of weakness, Anorexia, Weight gain, Cold Intolerance, Constipation, Menstrual irregularity, Dryness of skin, Hoarseness of voice, Falling of hair, facial puffiness, Thyroid swelling, Menstrual irregularities, Chest pain, Pedal oedema, Bradycardia, Hypertension. Dyspnoea, and Pallor should be carried out so that hypothyroidism can be diagnosed and managed earlier.

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Key Words: Hypothyroidism, constipation, weight gain, menstruation irregularity, edema.

INTRODUCTION

Hypothyroidism is a common endocrinal disorder. Crude prevalence of hypothyroidism is 31.1/1000 population and the overall crude incidence is 7/1000 population.[1] Hypothyroidism may present with variety of clinical features like lethargy, dry skin, hair loss, cold intolerance, constipation, weight gain, menstruation irregularity, edema, hoarseness of voice, goiter, myopathy, paresthesia. On the basis of presence or absence of clinical features hypothyroidism can be classified as clinical and subclinical hypothyroidism respectively.[2]

Hypothyroidism is directly associated with hypertension, weight gain and lipid profile derangement which are well known risk factors for emergence of other non communicable diseases like diabetes mellitus, coronary artery disease, stroke, chronic kidney disease.[3] Meticulous evaluation of hypothyroid patients is needed to look out for these risk factors and possible comorbidities. Hypothyroidism may worsen the pre existing morbidities. Not much work has been done before regarding demographic, clinical, comorbidity and lipid profile status of hypothyroid patients in India.[4]

Many authors believe that there is down grading of clinical spectrum of hypothyroidism and now lot of subclinical, overt hypothyroidism is being detected by the means and biochemical profile alone. Despite increasing knowledge of pathophysiology of the thyroid disorder and the advent of highly sensitive assay for investigation of the thyroid gland function, hypothyroidism has frequently remained undiagnosed. This is probably because of wide variety of presenting sign and symptoms.[5]

Thyroid disease is different from other disease in terms of their ease of diagnosis, accessibility of medical treatment and relative visibility of thyroid swelling. Early diagnosis and treatment remain the corner stone of management.

MATERIALS AND METHODS

Study design: A hospital based prospective study

Study location: Department of General Medicine, Jagityal Medical College and Govt General Hospital, Jagityal, Telangana

Study duration: January 2022 to December 2022.

Sample size: 200 patients.

A hospital based prospective study were carried out in different wards of Department of General Medicine, Jagityal Medical College and Govt General Hospital, Jagityal, Telangana and total 200 patients were included in this study. The duration of the present study was one year and

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proper consent was taken from the institutional ethics committee. All the cases in this study were examined according to a clinical plan and investigated as the per need.

Laboratory test which included FT4, FT3, TSH, complete blood count, renal function test, liver function test, lipid profile, blood and sugar were done. Specific investigation like ECG, Echocardiography, Chest X-Ray was also advised accordingly.

Inclusion criteria

- All the patients presented with signs and symptoms suggestive of hypothyroidism.
- Patients with thyroid profile suggestive of hypothyroidism
- Age more than 15 years of age.
- Patients who given the consent for the study.

Exclusion criteria

- Patients whose thyroid profile were in the normal limits.
- Patients who were not given consent for the study.
- Age less than 15 years of age.

RESULTS

In present study, total 200 patient of hypothyroidism were evaluated out of these 136 (68%) were female and 64 (32%) were male. Male to female ratio in this study was 2:1. The maximum number of patients was in the age group of 31 to 40 years. 6 (3%) cases were above the age of 71 years.

The most common symptoms were weakness 184 (92%), Dryness of skin 152(76%), weight gain 128(64%), Facial puffiness 108(54%), constipation 96(48%), Menstrual irregularities 88(44%), Hoarseness of voice (36%), Chest Pain (32%), Anorexia (32%), Cold Intolerance (26%), Thyroid Swelling (23%), Falling of hair (18%) whereas most common Sign were pedal oedema 86 (43%), Hypertension 80 (40%), Dyspnoea 60(30%), Bradycardia 44(22%), Pallor 40(20%), and Delayed ankle reflexes 36 (18%).

Out of 136 females in this study 88 females have menstrual irregularities while 48 had no menstrual irregularities, 40 had menorrhagia while 30 females had oligomenorrhea and 18 had Polymenorrhagia.

Gender	No of patients	Percentage
Male	64	32%

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Female	136	68%

Table 1: Gender Distribution

Age in years	No of patients	Percentage
15-20	16	8%
21-30	24	12%
31-40	60	30%
41-50	48	24%
51-60	28	14%
61-70	18	9%
Above 71	6	3%
Total	200	100%

Table 2: Age distribution

Symptoms	No of patients	Percentage
Weakness	184	92%
Anorexia	64	32%
Weight gain	128	64%
Cold Intolerance	52	26%
Constipation	96	48%
Menstrual Irregularity	88	44%
Dryness of skin	152	76%
Hoarseness of voice	72	36%
Falling Of hair	36	18%
Facial Puffiness	108	54%
Thyroid Swelling	46	23%
Chest Pain	64	32%

Table 3: Symptoms of Hypothyroidism

Signs	No of patients	Percentage
Pallor	40	20%
Pedaloedema	86	43%
Bradycardia	44	44%
Dyspnoea	60	60%
Delayed ankle reflexes	36	36%
Hypertension	80	40%

Table 4: Signs of Hypothyroidism

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DISCUSSION

Hypothyroidism is a clinical state that results from failure of adequate production of thyroid hormone within the thyroid gland. Hypothyroidism and subclinical hypothyroidism are common conditions seen in clinical practice and are diagnosed often on laboratory parameters.[6] These conditions are more common in women and are often undiagnosed in clinical practice. In a developing and densely populated country like India communicable diseases are priority health concerns due to their large contribution to the national disease burden but there have been no nationwide studies on the prevalence of Hypothyroidism in India.[7]

In present study, out of 200 patients there were 32% male and 68% female. This finding closely related to studies carried out by Haritha, et al. in which there were 76% female and 20% male out of 100 patients. Our study also closely relates to a study done by Ali Jabbari, with 84% females and 16% male patients.[8] The most common age group affected in our study was between 31-40 years of age, in which 30% cases were noted, which is comparable to observation made by Saha Pradip Kumar, et al., who found maximum number of case in 36-45 year age group. The most common symptoms were weakness (92%), Dryness of skin (76%), weight gain (64%), Facial puffiness (54%), constipation (48%) and Menstrual irregularities (38%) whereas most common Sign were pedal oedema (40%), Dyspnoea (30%), Bradycardia (92%), Pallor (20%), and Delayed ankle jerk (18%).[9]

Ravindra Kumar, et al., found in their study that dry skin was the most common symptom followed by loss of hairs, gain of weight, constipation, menstrual disturbances and hoarseness of voice. In our study the incidence of constipation was 80 (40%). This finding closely relates to studies carried out by Zulewski, et al., who reported the constipation (52%). In this study of 200 patients, total 22% patients were having Bradycardia. This finding was in accordance with Ashok Kumar, et al. who reported bradycardia 29.4%. Menorrhagia (20%)) was the most common complaint among the patients with menstrual disorders due to hypothyroidism, however observations of Pahwa, et al. in his study shows that menorrhagia (50 %), was the most common complaint which was more than this study.[10]

CONCLUSION

Routine screening of patients with signs and symptoms of weakness, Anorexia, Weight gain, Cold Intolerance, Constipation, Menstrual irregularity, Dryness of skin, Hoarseness of voice, Falling of hair, facial puffiness, Thyroid swelling, Menstrual irregularities, Chest pain, Pedal oedema, Bradycardia, Hypertension. Dyspnoea, and Pallor should be carried out so that hypothyroidism can be diagnosed and managed earlier.

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