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Original Research Paper

Medicine

A STUDY ON PREVALENCE OF HYPOTHYROIDISM IN PATIENTS ATTENDED LIFE STYLE MANAGEMENT CLINIC

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ABSTRACT

Obesity and hypothyroidism are two common clinical conditions that has been linked together closely. The link has become more relevant in the context of unprecedented rise in prevalence of obesity worldwide. The study was conducted to get the prevalence of hypothyroidism in 244 patients attended Lifestyle management clinic of Government Medical College Hospital, Thiruvananthapuram, Kerala.

Results: 12.3% of study population were hypothyroid. Majority of them belonged to the age group of 40-49 years. None of the males were affected. 14.5 % female studied population were affected. Hypothyroidism was seen in 18% of those with normal BMI, 12% of overweight, 12% of obese.

KEYWORDS : BMI, Fat %, WHR, Obesity, Hypothyroidism.

INTRODUCTION

According to common perception, hypothyroidism is held responsible for obesity. However, linking them causally is controversial. Overt hypothyroidism is associated with modest weight gain, but there is a lack of clarity regarding subclinical hypothyroidism.

Novel view indicates that changes in thyroid-stimulating hormone (TSH) could well be secondary to obesity. The increasing prevalence of obesity further confounds definition of normal TSH range in population studies.

Here we will review the intriguing relationship between obesity and hypothyroidism

OBJECTIVES

To study the prevalence of hypothyroidism in patients attended Lifestyle management clinic in the Department of PM&R, Government Medical College, Thiruvananthapuram, Kerala, India from January 2017 to December 2017.

METHODOLOGY

STUDY SETTING

- Lifestyle Management Clinic
- The Dept. of PM&R
- Government Medical College
- Thiruvananthapuram

STUDY PERIOD

- One year, from January 2017 to December 2017.

STUDY POPULATION-

All patients who attended Lifestyle management Clinic during the period.

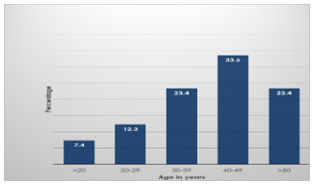
Variables

Age, sex, height, weight, waist-hip ratio, body mass index, fat percentage, thyroid status and co-morbidities.

Data Analysis:

Data was entered into Excel sheet, qualitative variables were expressed as proportion, quantitative variables were expressed as mean and standard deviation. Chi-square test was done to find the association.

OBSERVATIONS



Age in years	Frequency	Percent
<20	18	7.4
20-29	30	12.3
30-39	57	23.4
40-49	82	33.6
>50	57	23.4
Total	244	100.0

Sex	Frequency	Percent
Male	36	14.8
Female	208	85.2
Total	244	100.0

Height	Frequency	Percent
140-149	60	24.6
150-159	117	48.0
160-169	52	21.3
170-179	15	6.1
Total	244	100.0

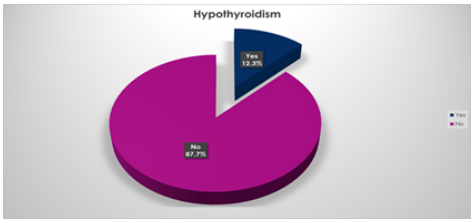
BMI	Frequency	Percent
Normal	14	5.7
Over weight	55	**22.5**
Obese	175	**71.7**
Total	244	100.0

fat%	Frequency	Percent
<25	1	.4
25-34	16	6.6
35-44	62	25.4
45-54	105	**43.0**
55-64	58	23.8
>65	2	.8
Total	244	100.0

WHR	Frequency	Percent
0.8-.89	17	7.0
0.9-.99	192	**78.7**

>1	35	14.3
Total	244	100.0

weight	Frequency	Percent
60-79	108	44.3
80-99	87	35.7
100-119	32	13.1
>120	17	7.0
Total	244	100.0



Age	Hypothyroidism				Total	
	Present		Absent			
	N	%	N	%	N	%
<20	1	5.6	17	94.4	18	100.0
20-29	3	10.0	27	90.0	30	100.0
30-39	9	15.8	48	84.2	57	100.0
40-49	14	17.1	68	82.9	82	100.0
>50	3	5.3	54	94.7	57	100.0
Total	30	12.3	214	87.7	244	100.0

Gender	Hypothyroidism				Total	
	Present		Absent			
	N	%	N	%	N	%
Male	0	0.0	36	100.0	36	100.0
Female	30	14.4	178	85.6	208	100.0
Total	30	12.3	214	87.7	244	100.0

Weight	Hypothyroidism				Total	
	Present		Absent			
	N	%	N	%	N	%
60-79	17	15.7	91	84.3	108	100.0
80-89	9	10.3	78	89.7	87	100.0
100-119	1	3.1	31	96.9	32	100.0
>120	3	17.6	14	82.4	17	100.0
TOTAL	30	12.3	214	87.7	244	100.0

BMI	Hypothyroid				Total	
	Present		Absent			
	N	%	N	%	N	%
Normal	2	18.2	9	81.8	11	100.0
Over weight	7	12.7	48	87.3	55	100.0
Obese	21	12.1	153	87.9	174	100.0
Total	30	12.3	213	87.7	243	100.0

WHR	Hypothyroid				Total	
	Present		Absent			
	N	%	N	%	N	%
0.8-.89	3	17.6	14	82.4	17	100.0
0.9-.99	24	12.5	168	87.5	192	100.0
>1	3	8.6	32	91.4	35	100.0
Total	30	12.3	214	87.7	244	100.0

Fat %	Hypothyroid				Total	
	Present		Absent			
	N	%	N	%	N	%
<25	0	0.0	1	100.0	1	100.0
25-34	1	6.3	15	93.8	16	100.0
35-44	11	17.7	51	82.3	62	100.0
45-54	9	8.6	96	91.4	105	100.0
55-64	9	15.5	49	84.5	58	100.0
>65	0	0.0	2	100.0	2	100.0
Total	30	12.3	214	87.7	244	100.0

RESULTS

244 patients were studied

Majority of the study population was in age group-40-49(33%), Females (85%), Height 150-159 (48%), Weight 60-79 (44%), Obese (71.7%), Fat % 45-54 (43%), WHR 0.9-.99 (78.7%).

12.3% of study population was hypothyroid, Majority of them had following characteristics: 17.1% were in the age group of 40-49 yrs, No males were affected, only 14.5 % female studied population were affected. Analysing the association between BMI and hypothyroidism, the latter was found to be affected in all the ranges of BMI. 18% of the studied population with normal BMI, 12% of those with overweight, 12% of obese were found to be hypothyroid.

DISCUSSION

Hypothyroidism was found to be affecting 12.3% of the study population . The results are consistent with previous studies. Female gender and older age group were found to have significant association with hypothyroidism. No significant association was seen with BMI / WHR / FAT%.

In a study by Ambika Gopalakrishnan et al, the overall prevalence of hypothyroidism was 10.95% which was an epidemiological study in eight cities of India.

In another study conducted to get the prevalence of primary hypothyroidism in an obese population by Selma Souto et al, where a sample of 257 women having a mean age of 40.9 ± 11.2 years old and a mean BMI of 44.6 ± 7.1 kg/m^2 was evaluated. They found a primary hypothyroidism prevalence of 13.2%.

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