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A study to assess the prevalence of thyroid disorders among the obstetric mothers in NMCH, Nellore

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Abstract

Thyroid disease is the second most common endocrine disorder causing invariable mortality and morbidity in pregnancy and child birth. Hyperthyroidism in pregnancy is due to grave's disease. It is an autoimmune disorder that results in thyroid stimulating hormone receptor stimulating antibody activation or the thyroid gland. "Thyroid storm" is rarely occurring various complication resulting due to untreated/poorly treated hyperthyroidism.

Objectives: To assess the prevalence of thyroid disorders among obstetrics mothers. To find out the association between the prevalence of thyroid disorders among obstetrics mothers with their selected socio demographic variables.

Methods: A quantitative research approach was used for this study. A sample of 50 obstetric mothers were selected by using non- probability convenience sampling technique. The data collection was done by using standardized inventory check list was used.

Results: The results showed that, In relation to prevalence of thyroid disorders 17(34%) had Hyperthyroidism, 33(66%) had Euthyroid and 0(0%) had Hypothyroidism. There was a statistical significant difference between the prevalence of thyroid disorder and socio demographic variable like income.

Conclusion: The study concluded that majority of the obstetric mothers had euthyroid 33(66%), hyperthyroidism are 17(34%), and non of them had hypothyroidism. So that the investigator felt that the study will be useful to prevent the thyroid disorders among obstetric mothers and general population.

Keywords: thyroid disorders, obstetric mothers, hyperthyroidism

Introduction

Thyroid gland is the largest endocrine gland in our body. It clasps the anterior and lateral surfaces of the pharynx, larynx, esophagus and trachea like a shield. It is yellowish brown in colour and highly vascular. The follicular cells secrete two principal iodine containing hormones. Thyroxine (T4) and tri iodothyronine (T3).

The main action of thyroid hormones is essential for the promotion or skeletal growth, ossification of cartilage, eruption of teeth, brain development, mental and physical growth.

Thyroid disease is the second most common endocrine disorder causing invariable mortality and morbidity in pregnancy and child birth. Hyperthyroidism is detected in about 0.1-0.2% of all pregnancies. Hypothyroidism occurs as a result of decreased activity of thyroid gland and occurs in 25% of pregnancy. Hyperthyroidism in pregnancy is due to grave's disease. It is an autoimmune disorder that results in thyroid stimulating hormone receptor stimulating antibody activation on the thyroid gland.

Untreated it may leads to miscarriage, preeclampsia, fetal growth retardation, placental abruption, prenatal mortality and neonatal morbidity. Dietary intake at iodine may help to alleviate the problem. Post partum thyroiditis is an autoimmune disorders 6-12 weeks following child birth. It is found in 10% - 15% of the women.

Objectives of the Study

1. To assess the prevalence of thyroid disorders among obstetrics mothers.
2. To find out the association between prevalence of thyroid disorders among obstetrics mothers with their selected socio demographic variables.

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Materials and Methods

A quantitative study approach and descriptive research method was used. The study was conducted in obstetric ward in NMCH at Nellore. The participants of 50 obstetric mothers were selected by Non convenient purposive sampling technique.. The data regarding T3,T4 and FSH value was obtained from obstetric mother. Finally the data was analyzed by using descriptive and inferential statistics

Description of The Study

Part I: It deals with demographic data includes age, education, religion, occupation, income per month, type of family, no. of pregnancies, no. of children.

Part II: Standardized value of thyroid hormone was used to assess the prevalence of thyroid disorders among obstetric

mothers.

Score Interpretation

The score was interpreted as follows

Thyroid test	Euthyroid	Hypothyroidism	Hyperthyroidism
T3	100-200ng/dl	<100ng/dl	>200ng/dl
T4	03-2.3ng/dl	<0.3ng/dl	>2.3ng/dl
TSH	0.4-5.0µu/ml	<0.4µu/ml	>5.0µu/ml

Results and Conclusion

Regards to demographic variables (74%)of women were 20-25 years, (36%) of the women belongs to primary education. Majority (72%) of respondents were multi gravida, (66%) of respondents were having on history of hyper thyroidism.

Table 1: Frequency and percentage distribution of prevalence of thyroid disorders among obstetric mothers.

Prevalence of Thyroid disorders	Frequency	Percentage (%)
Euthyroid	33	66
Hyperthyroidism	17	34
Total	50	100

Table 1: The above tables shows the frequency and percentage distribution of prevalence of thyroid disorders,

17 (34%) had hyperthyroidism, 33 (66%) had euthyroid and 0(0%) had hypothyroidism.

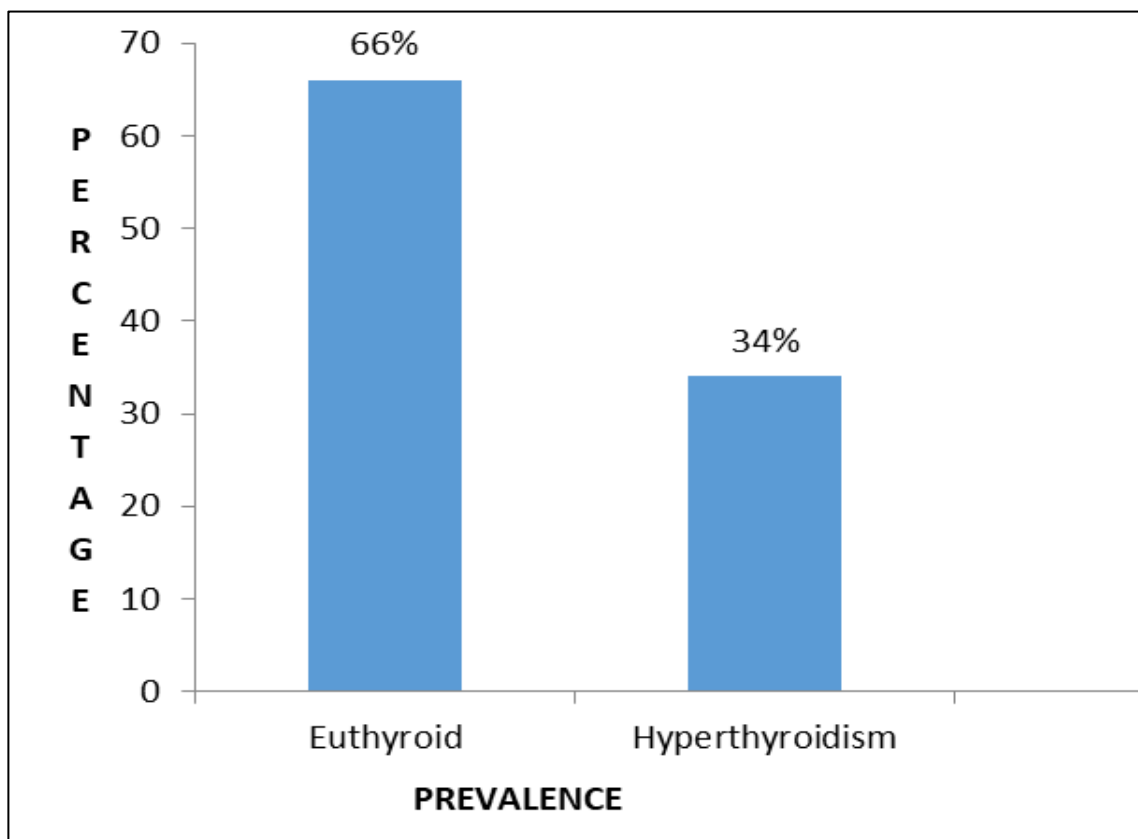


Fig 1: Percentage distribution of prevalence of thyroid disorders among obstetric mothers.

Table 2: Association between the prevalence of thyroid disorders among obstetric mothers with their selected Socio demographic variables.

S. no	Variables	Hyperthyroidism		Euthyroid		Chi square test
		F	%	F	%	
1.	Age in years					C=4.25 D f=3 T=7.82 P=0.05 Ns
	a. 21-25	15	30	22	44	
	b. 26-30	1	2	6	12	
	c. 31-35	0		4	8	
	d. >36	1	2	1	2	
2.	Education					C=1.897 D f=4 T= 9.49 P=0.05 Ns
	a. Illiterate	1	2	5	10	
	b. Primary education	2	4	5	10	
	c. Secondary education	8	16	11	22	
	d. Higher secondary education	4	8	6	12	
e. Graduate	2	4	6	12		
3.	Occupation					C=1.01 D f=3 T=7.82 P=0.05 Ns
	a. Un employee	12	24	19	38	
	b. Coolie	4	8	9	18	
	c. Private employee	1	2	4	8	
d. Govt. Employee			1	2		
4.	Income					C=19.724 D f=3 T=7.82 P=0.05 S*
	a. Rs.5001-7000/-	7	14	11	22	
	b. Rs.7001-9000/-	4	8	7	14	
	c. Rs.9001-11000/-	2	4	7	14	
d. Rs.>11000/-	4	8	8	16		
5.	Religion					C=4.695 D f=3 T= 7.82 P=0.05 Ns
	a. Hindu	13	26	19	38	
	b. Muslim	2	4	6	12	
c. Christian	2	4	8	16		
6.	Family type					C=1.201 D f=2 T=7.82 P=0.05 Ns
	a. Nuclear family	5	10	15	30	
b. Joint family	12	24	18	36		
7.	No. of pregnancies					C=0.673 D f=1 T= 3.84 P=0.05 Ns
	a. Primi	6	12	8	16	
b. Multi gravid	11	22	25	50		
8.	Trimester					C=6.816 D f=3 T= 7.82 P=0.05 Ns
	a. Before pregnancy	3	6	8	16	
	b. 1 st trimester	13	26	14	28	
	c. 2 nd trimester	1	3	6	12	
d. 3 rd trimester	0		5	10		
9.	No. of children					C=3.87 D f=3 T= 7.82 P=0.05 Ns
	a. 0	7	14	9	18	
	b. 1	5	10	18	36	
	c. 2	5	10	5	10	
d. 3	0	0	1	2		

There is significant association between the income with prevalence of thyroid disorders. There is no significant association between the age, education, occupation, religion, type of family, no. of pregnancies, trimester of getting thyroid disorder and no. of children with prevalence of thyroid disorders.

Discussion

The discussion of the present study was based on the findings obtained from the descriptive and inferential statistical analysis of collected data. It was presented in the view of the objectives of the study.

There was a statistical significant difference between the prevalence of thyroid disorder and socio demographic variable like income. Regarding the income the calculated value is 19.714 and the table value is 7.82. The calculated value is greater than the table value. Hence there is

significant association between the income and level of prevalence.

Conclusion

The study concluded that majority of the obstetric mothers had euthyroid 33(66%), hyperthyroidism are 17(34%), and non of them had hypothyroidism. Hence the obstetric mothers gained knowledge regarding the thyroid disorders (hypothyroidism & hyperthyroidism) and treatment modalities of thyroid disorders. So the investigator felt that the study will be useful to prevent the thyroid disorders among obstetric mothers and general population.

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