

Assessment of Knowledge and Awareness on Thyroid Disorders and Impact of Thyroid Disorders during Pregnancy among Women in Assam

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ABSTRACT

Background: Mother's normal thyroid function is very essential for both the Mother and child health during pregnancy. Mother's lack of knowledge and awareness regarding thyroid disorders and impact of thyroid disorders during pregnancy may lead to complications in pregnancy if the mother is having thyroid disorder.

Method: A cross-sectional descriptive study was conducted in the month of June 2019 in two urban villages in Guwahati, Assam. Sample size was taken 40 which included women in the age group between 20- 40 years. Purposive sampling technique was used to draw the sample. A structured questionnaire was developed with multiple choice questions which comprised questions related to demographic variables, knowledge and awareness on thyroid disorders and impact of thyroid disorders during pregnancy. Data was collected by administering this structured questionnaire to the women.

Result: In the study 90% of the women had inadequate, 10% of the women had moderately adequate and none of the respondents had adequate knowledge and awareness regarding thyroid disorders and impact of thyroid disorders during pregnancy.

Conclusion: Women are needed to be more knowledgeable and aware of thyroid disorders and impact of thyroid disorders during pregnancy as normal functioning of maternal thyroid gland is very essential for both the mother and fetus. The study revealed that women have inadequate knowledge and awareness on thyroid disorders and impact of thyroid disorders during pregnancy. Among the respondents 50% had done thyroid test during their pregnancies. Only 25% of the respondents had given correct response on sign and symptoms of thyroid disorders during pregnancy. None of the respondents were aware of risk for mothers for untreated thyroid disorders.

Keywords: Knowledge, Awareness, Thyroid disorder, impact, Pregnancy

INTRODUCTION

Thyroid is an endocrine gland located in front of the trachea. The thyroid gland secretes Triiodothyronine (T3) and Thyroxine (T4) hormones which play a critical role in metabolism of all the body systems. ^[1] Thyroid disorders occur due to imbalance of the thyroid hormones in the body and it affects the way body utilizes

energy. Low thyroid hormones in the blood cause decrease in overall basal metabolic rate of the body whereas high thyroid hormones increase the overall basal metabolic rate. ^[2] During pregnancy thyroid hormones are crucial for the development of brain and nervous system of the fetus. The fetus solely depends on its mother's thyroid hormone supply during the first three

months of pregnancy as the fetus start to produce its own thyroid hormones at around 12 weeks. [3]

Undiagnosed and untreated thyroid disorders during pregnancy may increase the risk for miscarriage, premature delivery, still birth or baby born with low I.Q. Thyroid disorders may also put pregnant women in risk for preeclampsia, postpartum hemorrhage and anemia. In US about 20 million people have some form of thyroid disorders. [4] In India it is estimated that 42 million people suffer from thyroid disorders. [5] Women are three times more at risk of developing thyroid disorders than men. 44.3% of pregnant women suffer from hypothyroidism during the first three months of pregnancy. [6] In Guwahati, Assam approximately 33.01% of the adult population has thyroid disorders. [7]

MATERIALS AND METHODS

A cross sectional descriptive study was conducted in two urban villages in Guwahati, Assam among 40 women which accounts 80 percentage of the total population. The objectives of the study were to assess knowledge and awareness on thyroid disorders and impact of thyroid disorders during pregnancy among women. Women who were literate and falling in the age group between 20 to 40 years were included in the study. An informed consent was obtained from the respondents who were willing to participate. Purposive sampling technique was used to draw the sample. A structured questionnaire was developed to collect data on the demographic variables, knowledge and

awareness on thyroid disorders and impact of thyroid disorders during pregnancy. It was composed of 6 question items related to demographic variables, 13 question items related to knowledge and awareness on thyroid disorders and 8 question items related to knowledge and awareness on impact of thyroid disorders during pregnancy. The tool was validated by five subject experts and reliability was tested by using split half method. The tool was found to be reliable at r (correlation coefficient) = 0.89. The data was collected in June 2019.

Statistical Analysis:

The data collected were tabulated, analyzed and interpreted through frequencies, percentages and standard deviation. Excel and SPSS (statistical package for social science) were used for the analysis of data.

RESULTS

This study was conducted among 40 women aged between 20-40 years. Majority of the women 24 (60%) were from the age group 31-40 years, 14 (35%) had a graduate level education, 15 (37%) were clerical workers and 28 (70%) were married. 36 (90 %) of the women had inadequate, 04 (10%) had moderately adequate and none of the respondents had adequate knowledge and awareness on thyroid disorders and impact of thyroid disorders during pregnancy. The overall mean score was 6.7 with SD (standard deviation) ± 2.36 , which indicated that the scores of the women were less dispersed and all had equal level of knowledge and awareness.

Table 1: Knowledge and awareness on thyroid disorders n=40

Sl.no	Question type	Frequency of correct response	Percentage (%)
1.	Meaning of thyroid	7	17.5
2.	Anatomical location of thyroid gland	5	12.5
3.	Hormones secreted by thyroid gland	2	5
4.	Role of thyroid hormones in body	2	5
5.	Role of TSH (Thyroid stimulating hormone)	0	0
6.	Meaning of Hypothyroidism	4	10
7.	Meaning of Hyperthyroidism	4	10
8.	Sign and symptoms of thyroid disorders	9	22.5
9.	Thyroid screening test	5	12.5
10.	T3, T4 & TSH values in hypothyroidism	0	0
11.	T3, T4 & TSH values in hyperthyroidism	0	0
12.	Type of medicines used in hypothyroidism	2	5
13.	Type of medicines used in hyperthyroidism	0	0

Highest frequency of correct response was only 9 on “sign and symptoms of thyroid disorders”. None of the respondents could correctly response on “role of TSH”, “T3, T4 & TSH values in hypothyroidism & hyperthyroidism” and “Types of medicines used in hyperthyroidism”

Table 2: knowledge and awareness on impact of thyroid disorders during pregnancy n=40

Sl.no	Question type	Frequency of correct response	Percentage
1.	Control of thyroid disorder before pregnancy	14	35
2.	Thyroid test during pregnancy	20	50
3.	Normal TSH value during 1 st trimester of pregnancy	0	0
4.	Role of thyroid hormones for fetal development	2	5
5.	Importance of mother’s normal thyroid function	3	7.5
6.	Sign and symptoms of thyroid disorders during pregnancy	5	12.5
7.	Risk for fetus in untreated thyroid disorder of mother	2	5

Highest frequency of correct response was 20 on “thyroid test during pregnancy”

Table 3: Frequency and percentage distribution on knowledge and awareness scores

Sl No	Level of knowledge and awareness	Scores	Classification of Respondents	
			N	%
1	Inadequate	Below 50 %	36	90
2	Moderately adequate	51-75 %	04	10
Total			40	100

Majority of the respondents 36(90%) had inadequate, only 04(10%) of the respondents had moderately adequate and none of the respondents had adequate knowledge and awareness on thyroid disorders and impact of thyroid disorders during pregnancy.

DISCUSSION

This study reveals that out of 40 women, 4(10%) of the women know the meaning of hypothyroidism and hyperthyroidism. 9(22.5 %) of the women are aware of the sign and symptoms of thyroid disorders. 5(12.5%) of the women are aware of the thyroid screening test, 5(12.5%) know the anatomical location of thyroid gland and none of the women know the medical management of thyroid disorders. Only 2 (5%) of women are aware of the type of medicines used in hypothyroidism.

According to a cross sectional study conducted by Rai Shailesh et al. out of 250 participants 49.20% females are aware of hyperthyroidism and hypothyroidism, 29.2% females have never heard the word “thyroid”, 55.2% females thought that thyroid disorders can be cured using alternative medicine. [8] According to a cross sectional study conducted by Singh A. et al.

out of 200 patients, 60 % of patients knew that thyroid is a gland situated in the neck and 50 % of patients knew about hypothyroidism and hyperthyroidism. 40 % of the patients thought that the thyroid medicines could be stopped once the thyroid function is normal. [9] A study conducted by Kumar Pradeep et al. among 250 patients revealed that 35.2% and 51.2% of patients know the meaning of thyroid and hypothyroidism respectively. Only 25.6% of patients know the type of medicines used for treatment of hypothyroidism. [10]

In the present study 36(90 %) of the respondents had inadequate, 4(10%) had moderately adequate knowledge and awareness regarding thyroid disorders and impact of thyroid disorders during pregnancy. According to a study conducted by Baskaran P.M. Arulmozhi and Baby Prasanna among 60 antenatal mothers with hypothyroidism, 46.66% of the antenatal mothers had inadequate knowledge and 18.33% had adequate knowledge on hypothyroidism. [11]

CONCLUSION

Women are needed to be more knowledgeable and aware of thyroid disorders and the impact of thyroid disorders during pregnancy as normal

functioning of maternal thyroid gland is very essential for the health of both the mother and fetus.

The overall result of the study shows that the knowledge and awareness of thyroid disorders and impact of thyroid disorders during pregnancy is inadequate. The major strength of the study is that the study has covered a significant issue related to maternal and child health but the study was delimited to only two urban villages.

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