



PREVALENCE OF THYROID DISORDER IN WOMEN COMING FOR DELIVERY IN A TERTIARY CARE CENTRE BASED IN NORTHERN SUB HIMALAYAN REGION

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ABSTRACT

Objective: This study was carried out to analyze the prevalence of thyroid dysfunction with in an obstetric population in Uttarakhand.

Method: It was a retrospective study which was conducted by analyzing the data of pregnant patients who delivered in dept. of obstetrics and gynecology, Govt. Medical college, Haldwani over a period of January 2017 to December 2018. All the patients who were admitted in the labour room for delivery during this period were investigated for their thyroid function status.

Result: During the given period total 8228 women delivered in our institution. Of this 66 (0.8%) women were diagnosed with thyroid dysfunction. The patients who were diagnosed as hypothyroid were 61 (0.74%) and those who were diagnosed as hyperthyroid were 5 (0.06%).

Conclusion: Despite of all the efforts towards testing and treatment of thyroid dysfunction a lot of women still report to labour room with the problem and sometimes with the history of no or ineffective treatment when the problem is already diagnosed. The prevalence is still uneven in different parts of country. So we need to take strong measures to increase awareness regarding the problem of thyroid dysfunction and its consequences. Also its necessary to make proper testing and treatment facility available at every primary health care centre.

KEYWORDS :

Thyroid disorders are one of the most common endocrine disorders seen during pregnancy as body is not able to adequately adopt to these changes resulting Thyroid dysfunction. There are various factors that contribute to the dysfunction like increased estrogen, hCG, increased renal loss of iodine due to increase in Glomerular filtration rate, changes in metabolism of Thyroid hormone and modification in iodine transfer to placenta. Also the iodine requirement in pregnancy is increased by 50% (1).

Thyroid disorders during pregnancy is associated with a lot of adverse outcomes for both mother and fetus like abortion , preeclampsia, abruptio placentae, preterm labour, low birth weight. Those children born to untreated mothers have profound effect on future intellectual development(2). Attention deficit and Hyperactivity syndromes has been reported in children born to hypothyroid mothers (2,3). Thyroid disorders may be overlooked in pregnancy because of non specific symptoms and hypermetabolic state of pregnancy. Western literature shows a prevalence of hypothyroidism in pregnancy of 2.5% and hyperthyroidism in pregnancy has prevalence of 0.1 to 0.4% (4). Few reports show prevalence of 4.8% to 11% amongst Indian pregnant population (5,6).

Much work has been done in India to assess the burden of thyroid disorders during pregnancy, however, most of the studies focused on the first trimester (7,8). Also these studies focused more on the hypothyroidism then hyperthyroidism. No Indian study, however has assessed the prevalence of thyroid dysfunction at term. Hence, this retrospective study was done to assess the prevalence of thyroid in women coming for delivery in a tertiary care centre of Northern sub himalayan region.

MATERIAL AND METHODS

This was a retrospective study done in the department of obstetrics and gynecology, Govt. Medical college, Haldwani, Uttarakhand from January 2017 to December 2018. Data of all the patient admitted for delivery during this period was analyzed. All the patients were tested for thyroid function at the time of admission in spite of whether they were previously booked or unbooked or whatever there thyroid function status was in the first trimester. The test were performed after a detailed history and examination. Serum samples were sent for testing TSH, FT₃, FT₄ levels. The reference ranges of the test

values used in this study were as per the guidelines of American Thyroid Association for the diagnosis and management of thyroid disease during and postpartum (Normal range-S.TSH (third trimester)-0.3 to 3m IU/L FT₄-0.7 to 1.8ng/ml FT₃-1.7 to 4.2pg/ml). Based on that they were characterized as Euthyroid, Hypothyroid and Hyperthyroid.

RESULT

During the period from January 2017 to December 2018 women were admitted for delivery in the Department of obstetrics and gynecology, Govt. Medical college , Haldwani, Uttarakhand. The mean age of the women were 25.43± 2.77. Of these total patients 3202 (38.92%) were primigravida, 3102 (37.7%) were second gravida, 1233(15%) were third gravida and 691 (8.4%) were grandmultipara. Among the total patients admitted for delivery 66 patients (0.8%) had thyroid dysfunction. Of these patients 61 patients (0.74%) were diagnosed to be hypothyroidism and 5 patients (0.06%) were diagnosed to be Hyperthyroid. Of the total 61 hypothyroid patients 35 (57.37%) were already on treatment for hypothyroidism and 26 (42.63%) were newly diagnosed at the time of admission.

DISCUSSION

Prevalence of Thyroid disorder depends on various factors like geographical condition, ethnic condition and environmental condition (9). Thyroid disorders mainly hypothyroidism according to various studies are more common in hilly areas due to low soil iodine content in high altitude leading to iodine deficiency (10). Also there is lack of education and awareness in backward hilly areas. According to studies thyroid disorder are 8 times more common in females than males (11,12).

The prevalence of thyroid disorder in our study was 0.8% which was much less than other studies of Sahu MT et al and Pahwa S et al (13,14). According to Sahu MT et al and Pahwa S et al the prevalence of thyroid dysfunction was 10% and 12.7% respectively. The cause of discrepancy may be that because of the increase awareness and testing for thyroid dysfunction and also that patients included in our study were all third trimester compare to other studies which also included first and second trimester patients.

In our study prevalence of hypothyroidism was 0.74% which was almost more than 10 times of the prevalence of

hyperthyroidism(0.06%). Nanda MS et al also reported the prevalence of hypothyroidism in hilly areas to be double of that of hyperthyroidism (15). The prevalence of hypothyroidism and hyperthyroidism in our study was 0.74% and 0.06% respectively. In the study conducted by Sahu MT et al the prevalence of hypothyroidism and hyperthyroidism was 11.05% and 1.57% respectively (13). Here the ratio of prevalence of hypothyroidism and hyperthyroidism is comparable between the two studies.

The percentage of patients already diagnosed and on treatment for hypothyroidism (57.37%) was more than those newly diagnosed (42.63%) which was consistent with the study of Kalra B et al (16) where the hypothyroid patient on treatment (84.3%) was much higher than the newly diagnosed(15.7%).

CONCLUSION

The prevalence of thyroid dysfunction in pregnancy has a variable presentation in different parts of our country. Even though the prevalence of thyroid dysfunction especially hypothyroidism is considered to be high in Himalayan and sub-Himalayan regions, a lot of places have showed a decrease in prevalence mainly in areas with improved facilities for testing and treatment of disorders. But there still remains a lot of interior and backward areas where the knowledge, awareness and necessary facilities which can help to reduce the prevalence of thyroid disorders have not yet reached. Keeping in mind the adverse effects of thyroid dysfunction on pregnancy and fetal outcome it is very important that facilities regarding testing and treatment of thyroid disorders be made available in every primary health care center of our country.

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