Extended Abstract

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Thyroid Disorders 2016 - Spectrum of Thyroid disorders in Diabetes Mellitus in Nepal

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Background & Aim: The coexistence of Diabetes Mellitus and Thyroid disorders is a known clinical observation. The objective of this study was to see the spectrum of Thyroid disorders in Diabetes Mellitus in Nepal.

Methods: 271 known or newly detected cases of Diabetes Mellitus aged more than 15 years were selected randomly from the patients attending to BPKIHS from September 2012 to September 2013. These patients were subjected to evaluation for Thyroid function – clinically and biochemically and other relevant investigations were done.

Results: Out of 271 subjects only 23 patients (8.48%) were found to have Thyroid disorders. Among 23 patients; 11 had euThyroid, 4 had subclinical hypoThyroidism; 7 had clinical hypoThyroidism and 1 had subclinical hyperthyroidism. We found majority of patients with female hypoThyroidism. We found body mass index, mean triglyceride and cholesterol levels were more in those diabetic patients having coexisting hypothyroidism. So every diabetic patient should be screened for Thyroid function test.

INTRODUCTION: Thyroid brokenness is a significant general medical issue among the Nepalease populace . It has been assessed that 0.2% of the passings in Nepal result from endocrine issue, among which Iodine lack has been a significant reason . As per the WHO, more prominent than 190 million experience the ill effects of iodine insufficiency issue . The thyroid issue might be because of inherent elements, a hereditary inclination, lacking degrees of dietary iodine admission, pregnancy, radiotherapy, viral contaminations, medical procedure, hidden sicknesses, for example, infiltrative clutters, or even autoimmunity .

Nepal is an uneven landlocked zone which is arranged far away from the ocean. The land situation of the nation, alongside a high yearly precipitation, prompts a low soil iodine content. These variables lead to a high rate of iodine inadequacy issue. Iodine insufficiency is common in the Himalayan, sub-Himalayan and the Terai districts of Nepal . The pervasiveness statuses of hyperthyroididm (13.68%) and hypothyroididm (17.19%) were concentrated in the eastern piece of Nepal [8]. Despite the fact that the commonness of thyroid brokenness had been concentrated in different pieces of Nepal, apparently, this is the principal study which is being accounted for from the western piece of Nepal. This kind of study has not been accounted for from our district up until now. The goal of this investigation was to evaluate the pervasiveness of thyroid brokenness in the western area of Nepal.

MATERIAL AND METHODS

The Study Design: This was an emergency clinic based investigation which was led in the Department of Biochemistry, Charak Hospital. In this review study, the subjects who visited Charak Hospital from first January 2011 to first January 2012 were enlisted. Those patients who had played out the thyroid capacity test, {i.e. free tri-iodothyronine (fT3), free thyroxine (fT4) and the thyroid incitement hormone (TSH)} were tried out the examination. The subjects with deficient thyroid capacity tests were barred from the examination. The factors which were gathered were age, sexual orientation and the T3, T4 and the TSH levels.

Assortment of the Blood Samples: 2.0 ml of venous blood was gathered from the subjects who went to Charak medical clinic. The blood which was gathered

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in a plain vial was permitted to clump and it was centrifuged at 3000 rpm for 15 minutes. The isolated serum was put away at - 20oC for the presentation of hormone tests.

Test of the Thyroid Function Panel: The thyroid capacity test boards (fT3, fT4 and TSH) were measured by the ELISA strategy by utilizing a standard pack. fT3 and fT4 were tested by a serious immunoassay strategy and TSH was examined by a sandwich immunoassay technique. All the three parameters were evaluated by keeping a similar standard convention which was given by the producer (RFCL, India). For each analyte, 100 µL of the catalyst con-jugates of the relating analytes were added to the wells after the option of the 50 µL tests and the examples were brooded for an hour. They were washed threefold with the wash support to wash off the abundance conjugate. After this, 100 µL of the TMB (Tetramethyl benzidine) substrate was added to each well and the plates were brooded precisely for 15 minutes. The response was halted with 50 µL of a 0.1 N HCl arrangement. The perusing of each very much was taken at 450 nm against a differential channel of 690 nm.

Measurable ANALYSIS: The information were entered and broke down by the Software Package for Social Sciences, form 16 (SPSS 16). The information were spoken to as rate, recurrence, mean and standard blunder. The Chi-square test, the ANOVA test and the Mann Whitney Test were applied. The information were considered as critical at a P estimation of 0.05.

RESULT: In this retrospective study, a total of 1504 subjects were enrolled from January 2011 to January 2012. Among these subjects, 1155 were females and 349 were males. The subjects were classified according to their thyroid status as hypothyroidism, hyperthyroidism, subclinical hypothyroidism, subclinical hyperthyroidism and euthyroidism, by taking the reference of the normal thyroid function test. Total hypothyroidism included hypothyroidism plus subclinical hypothyroidism and total hyperthyroidism represented hyperthyroidism and subclinical hyperthyroidism.

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