ABSTRACT

TITLE : A STUDY OF VISUAL EVOKED POTENTIALS, SERUM CALCIUM, FERRITIN AND LIPIDS IN HYPOTHYROID INDIVIDUALS

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Background: Thyroid diseases are common worldwide. In India, its prevalence is about 42 million. Women have higher prevalence than men. Hypothyroidism, a multiorgan endocrine disorder which affects brain, peripheral nerves & muscular system. It occurs due to decrease in thyroid hormones synthesis and low levels of circulating thyroid hormones. Hypothyroidism increases with age. Aim: To study about the visual evoked potentials, body mass index, serum calcium, serum ferritin & lipid profile in hypothyroids and compared with the controls.

Materials & methods: 100 subjects (50 cases & 50 controls) including both genders of age group 20-50 years, were selected for the study. These subjects underwent a medical history assessment, general physical examination including anthropology & thyroid gland examination in non communicable disease (NCD) outpatient department of Medicine in Tirunelveli Medical College & Hospital (TVMCH). After getting informed & written consent from these subjects, hematological parameters (serum calcium, serum ferritin, lipid profile) & biochemical investigations like thyroid profile were performed in the central certified laboratory of TVMCH. Visual evoked potentials in these subjects were recorded at the neurology department using physiopac machine. Results were statistically analysed using SPSS package (version 11.0). Results: Our study showed that hypothyroidism increased with age and had female preponderance. Also revealed that there was prolongation of P100 latency in hypothyroidism and statistically significant positive correlation of BMI, serum cholesterol, serum LDL, serum HDL with TSH. Negative correlation existed between serum calcium and TSH. Strong association between serum ferritin and thyroid hormones was observed. Serum triglycerides remained within normal limits in hypothyroidism. Conclusion: In hypothyroidism, there was prolongation of P100 latency, elevation of BMI and serum lipids. Serum calcium and serum ferritin were inversely related to TSH.

Key words: Hypothyroidism, Visual evoked potentials, Thyroid stimulating hormone, Serum Calcium, Ferritin, Lipids, Body mass index.