

A PROSPECTIVE CASE STUDY OF HYPOTHYROIDISM AND ITS ECG MANIFESTATIONS

KEYWORDS

Hypothyroidism, ECG, ECHO.

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ABSTRACT Cardiac abnormalities associated with hypothyroidism attracted great deal of investigational effort. There are only few studies done in our country to asses CVS parameters in hypothyroid patients. Hypothyroidism is known to cause reversible cardiac dysfunction in humans. This study is aimed at studying the cardiac manifestations of hypothyroidism by ECG and ECHO. Thus reassessing the need for treatment even in the milder forms of the disease.

Sample Size: 60 Cases of new hypothyroidism Inclusion Criteria:

Hypothyroid patients which include

a) Newly diagnosed patients

b) Detected hypothyroid patients not on treatment

c) Patients on L-thyroxine for less than 4 months.

Exclusion criteria:

1) Patients with known cardiac disease

2) Patients with COPD, severe anemia, diabetes mellitus or any other endocrinal disorder.

3) Patients taking medications that alter the thyroid function like beta-blockers, lithium, OCP's, steroids & alcohol.

RESULTS: AGE AND SEX DISTRIBUTION

Age in years	Male		Female		Total	
	No	%	No	%	No	%
21-30	4	25.0	16	36.36	20	33.33
31-40	6	37.5	20	45.45	26	43.33
41-50	4	25.0	4	9.1	8	13.33
51-60	2	12.5	4	9.1	6	10.0
Total	16	100.0	44	100.0	60	100.0

Most cases fell in the age group of 31-40 yrs. The female population constituted about 73.33% of the total.





ECG	Number(n=60)	%
1.Normal	18	30
2.Bradycardia	24	40
3.Low voltage complexes	20	33.33
4.STT changes	16	26.66
5.LBBB	4	6.66
6.RBBB	6	10

Normal ECG is found in 30% of patients. Bradycardia is most common finding seen in 24 patients counting for 40%. Low voltage complexes is seen in 33% patients.



ORIGINAL RESEARCH PAPER

DISCUSSION:

The observations made in 60 new cases of hypothyroidism that presented to Department of Medicine, ALLURI SITA RAMA RAJU MEDICAL COLLEGE are discussed here and results have been compared with other similar studies.

Age And Sex Distribution.

The age range of the study is between 21-60 years. Most patients belonged to the age groups of 31-40. There were an overall female preponderance over all age groups. The female population constituted about 73.3% of the total. Similar demographic profile was mentioned in most of medicine text books including Harrison text book of internal medicine.

ECG changes And Hypothyroidism.

ECG is normal in 9 patients (30%). Among abnormal ECG which constitutes 70% of the patients, low voltage complexes present in 33.33% of patients. On ECG the most common findings were bradycardia, present in 40% of cases. LBBB & RBBB found in 6.66% & 10% respectively. This finding is consistent with other studies like by R. Varma2 except conduction disturbances. M. H. Nikoo1, M.D. SUMS 2002 also documented sinus tachycardia QT prolongation and also ventricular tachycardia which are not found in our study

CONCLUSION:

In this study consisting of 60 new hypothyroid patients bradycardia is the most common abnormal finding fallowed by low voltage complexes in ECG.

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