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TO STUDY RELATIONSHIP BETWEEN CLINICAL AND INVESTIGATIONAL PROFILE IN PATIENTS OF MULTINODULAR GOITER.

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Conflicts of Interest: Nil

ABSTRACT:

Aim of study is to study relationship between clinical and investigational profile in patients of Multinodular Goiter with 50 individuals from Department of medicine, M.G.M. Medical College & M.Y. Hospital, Indore.

This study was conducted with the aim of assessing the recent trend of clinical involvement in multi-nodualr goiter pts. 50 patients were included in this study. 5 of them had hypothyroidism while 20 had hyperthyroidism and 25 were euthyroid. In all, the hyperthyroid, hypothyroid and euthyroid group did not show involvement of the cardiovascular & neurovascular system. There is no correlation between sex and susceptibility for the involvement of cardiovascular system in cases of multi-nodular goiter.

Keywords: Multinodular Goiter, Clinical & Investigation.

Introduction

The thyroid gland through its hormones serves as a metabolic thermostat, regulating the level of biochemical activity of most tissues of the body. In general, dysfunction of the thyroid gland leads to two sets of symptoms- those related to the local effect of a mass in the neck, and the effects of either an excess or a deficiency of thyroid hormones. Dysfunction of the thyroid gland ranks next only to diabetes mellitus amongst the endocrine diseases.[1]

Multinodular non-toxic goiter is the most prevalent thyroid pathology characterized by unilateral or bilateral thyroid growth with morphologically and/or functionally transformed follicles and euthyroidism.[2]

The normal thyroid gland is a fairly homogenous structure, but nodules often form within its substance. These nodules may be only the growth and fusion of localized colloid-filled follicles, or more or less discrete adenomas, or cysts. Nodules larger than 1 cm may be detected clinically by palpation. Careful examination discloses their presence in at least 4% of the general population. Nodules less than 1 cm in diameter not clinically detectable unless located on the surface of the gland are much more frequent. The terms adenomatous goiter, nontoxic nodular goiter, and colloid nodular goiter are used interchangeably as descriptive terms when a multinodular goiter is found.[3]

Material & Method

In our study 50 individuals from Department of medicine, M.G.M. Medical college & M.Y. Hospital, Indore were taken in the study for one year.

Group: Cases included 50 patients of Multinodular goiter. A written consent of all cases & control subjects was taken and all ethical issues considered.

Inclusion Criteria

- 50 Diagnosed cases of Multinodular goiter with symptoms and signs of hypothyroidism or hyperthyroidism or no symptoms and signs.
- Patients with biochemical evidence of hypothyroidism or hyperthyroidism.

Exclusion Criteria

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- Patients suffering from Hypertension, Diabetes Mellitus, Coronary artery disease or other causes of LV dysfunction.
- Patients with history of chronic alcoholism.

Study Protocol

All the patients of thyroid swelling were subjected to further clinical and laboratory evaluation--

1. Biodata: The particulars of the patient including age, sex, locality etc. were recorded.

2. Symptomatology: Non-cardiac general symptoms were recorded to aid the clinical diagnosis of thyroid dysfunction.

a) For Hyperthyroidism history of weight loss, fatiguability, weakness, nervousness, intolerance to heat, excessive sweating, increased appetite, increased frequency of bowel movement, insomnia, emotional disturbance, tremors, muscle weakness, eye complaints, pruritus, gynaecomastia, menstrual irregularity and fever with chills was noted.

b) For hypothyroidism weight gain, fatiguability, intolerance to cold, decreased appetite, increased sleep, decreased frequency of bowel movement, skin changes, hoarse voice, swelling of face and extremities, menstrual disturbances, galactorrhea, loss of body hair, decreased hearing, memory impairment, ataxia, paresthesias, arthralgia and muscle cramps were noted.

Results

Table 1: Incidence of main physical signs in hypothyroid cases

S. No	Signs	No. of cases	Percentage
1	Bradycardia	4	80%
2	Eye signs	1	20%
3	Goiter	5	100%
4	Skin changes	2	40%
5	Edema	2	20%
6	Delayed ankle reflex	1	20%
7	Myopathy	-	-

Table 2: Incidence of main physical signs in hyperthyroid

S. No	Signs	No. of cases	Percentage
1	Tachycardia	18	90%
2	Goiter	20	100%
3	Tremors	18	90%
4	Bruit over thyroid	12	60%
5	Eye signs	9	45%
6	Skin Changes	5	25%
7	Hyper-reflexia	10	50%

Discussion

We compared the distribution of cases in males and females and the incidence of cardiovascular & neurological involvement in goiter pts. in all the groups. We applied the free analysis of variance test (ANOVA) and found that the difference in incidence of cardiovascular & neurological involvement in multinodular goiter patients in these 3 groups was not statistically significant. Thus males and females with multi-nodular goiter are equally susceptible to cardiovascular & neurovascular system involvement.[4]

In the present study, all the patients presented with swelling in front of the neck; among them 94 patients reporting that it was of insidious in onset and gradually progressing. Rest of the patients could not comment on the onset and rate of growth as the swelling was noticed by others first.[5]

The least age recorded among both males and females was 18 years. Maximum age among males was 71 years and female 66 years, mean age being 36.48 years. A total of 59% of the patients have presented in the age group 21-40 years. Similar prevalence has been observed in the prospective studies by Rahman MM et al., where the prevalence was highest in the middle age group 3rd and 4th decades.[6] Study by Hanumanthappa et al., reported an incidence of 35% in the age group 21-30 years and 30% in the age group 31-40 years[7]. The present study is comparable to the above studies. This is of concern because most of the patients being managed were in reproductive age group.

Conclusion

This study was conducted with the aim of assessing the recent trend of clinical involvement in multi-nodualr goiter pts. 50 patients were included in this study. 5 of them had hypothyroidism while 20 had hyperthyroidism and 25 were euthyroid. In all, the hyperthyroid, hypothyroid and euthyroid group did not show involvement of the cardiovascular & neurovascular system. There is no correlation between sex and susceptibility for the involvement of cardiovascular system in cases of multi-nodular goiter.

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