



Clinical Study of Incidence and Types of Malignancy Among Goitre

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Abstract

Introduction: A solitary nodule may become cosmetically distressing to a patient and occasionally causes pressure symptoms. Less frequently, an autonomously hyperfunctioning single nodule may cause hyperthyroidism. However, in the greater proportion of patients, the major concern relates to the potential of malignancy within such a nodule.

Aim of the study: The study aims to determine the incidence and types of malignancy among goiter.

Materials and methods: Data collection by meticulous history taking and clinical examination appropriate laboratory and operative findings, histopathological report and follow up of cases.

Results: About,58% of Solitary thyroid nodules were found to be malignant. 60% of thyroid cancer occurred in patients between 30- 40 years of age.58% of malignancy were Papillary carcinoma. Female preponderance was seen with 93 percentage.

Conclusions: Incidence of malignancy was found to be more in solitary nodule thyroid when compared to multinodular goiter.

Keywords: Malignancy Solitary nodule, histopathology findings, goiter

INTRODUCTION

Goitre is defined as generalized enlargement of thyroid Solitary thyroid nodule can be defined as a goitre which on clinical examination appears to be a single nodule in an otherwise normal thyroid gland. [1] Solitary thyroid nodule remains a common clinical problem. Virtually any disease of the thyroid can present as a solitary nodule. A solitary nodule has a high risk of being malignant (10-20%) than the multiple palpable nodules of a multinodular goitre (5%). [2]A solitary nodule may become cosmetically distressing to a patient and occasionally causes pressure symptoms.[3] Less frequently, an autonomously hyperfunctioning single nodule may cause hyperthyroidism. However, in the greater proportion of patients the major concern relates to the

potential of malignancy with in such a nodule. Until recently, many clinicians have advised and practiced the routine surgical resection of all solitary thyroid nodules for definitive histological assessment. [4] Thyroid surgery, even in experienced hands is associated with definite morbidity and should not be undertaken lightly.[5] It is logical to propose a more selective surgical policy for a patient with a solitary thyroid nodule, advising operation only for those individuals in whom cancer has been diagnosed or suspected or who are otherwise at risk of their goitre. [6]. The incidence of thyroid cancer in patients with solitary thyroid nodule ranges from 11 to 20% (Kendall & Condon, 1969) 20.The vast majority of thyroid nodules are benign and do not require

removal. [7] The physician or surgeon should be able to perform an accurate clinical assessment of any thyroid nodule, appreciate the risk factors for thyroid cancer, and be able to evaluate which patient would benefit from surgery. Conservative management is appropriate when malignancy can be reasonably excluded.[8]

MATERIALS AND METHODS: This is a prospective study of randomly selected patients with clinically palpable goiter diagnosed and treated at Chengalpattu medical college. The total duration of the study was two years from 2017 December to 2019 December. 160 patients were subjected to basic

investigations like complete hemogram blood sugar, blood urea serum cholesterol, urine analysis, chest radiogram, and radiogram of the neck. Tissue diagnosis was obtained by fine-needle aspiration cytology in all the patients and tabulated. Thyroid profile was done in selected patients with features of hyper and hypothyroidism. A radioisotope scan was not done since the facility was not available at our hospital. All Operated specimen were subjected to histopathological examination. **INCLUSION CRITERIA:** Patient presenting with goitre, Age group 20-60, Both sex. **EXCLUSION CRITERIA:** Female patient not attained menarche, Age less than 19 years. History of radiation in childhood.

RESULTS

TABLE :1 INCIDENCE OF SNT AND MNG IN GOITRE

TOTAL NO OF GOITRE	SNT	MNG
160	25	135
PERCENTAGE	15.62	84.37

TABLE:2 SEX DISTRIBUTION

SEX		PERCENTAGE
FEMALE	149	93.12
MALE	11	6.8

Table:2 This distribution is following most of the reported series in our country and elsewhere. Female incidence is more partly because of increased prevalence and partly because of increased cosmetic awareness among females.

TABLE:3AGE DISTRIBUTION

AGE IN YEARS	NO OF PATIENTS	PERCENTAGE
21- 30	16	10
31-40	61	38

41-50	41	25.6
51-60	42	26.2
61 AND ABOVE	0	0

TABLE:4 INCIDENCE OF MALIGNANCY IN SNT

	SNT	MNG
NO OF CASES	7	5
PERCENTAGE	58	42

Table:4 Among 12 cases of thyroid malignancy, 7 cases clinically presented as solitary nodular thyroid.58 percentage of solitary nodular Thyroid were malignant.

TABLE:5 INCIDENCE OF TYPES OF MALIGNANCY

TYPES OF MALIGNANCY	NO	PERCENTAGE
PAPILLARY	7	58.33
FOLLICULAR	1	8.3
MEDULLARY	3	25
ANAPLASTIC	1	8.3

Table :5, 58 percentage of Thyroid malignancy were found to be of papillary carcinomatous variety.

TABLE :6 DISTRIBUTION OF CARCINOMA

S NO	TYPES	NO OF PATIENTS	PERCENTAGE
1	PAPILLARY CARCINOMA	7	4.3
2	FOLLICULAR CARCINOMA	1	0.625
3	MEDULLARY CARCINOMA	3	1.875
4	ANAPLASTIC	1	0.625

	CARCINOMA		
5	NODULAR GOITRE	142	88.75
6	HASHIMOTO THYROIDITIS	6	3.75

DISCUSSION

Thyroid being an endocrine gland, its involvement is a diverse issue from a meager cosmetic problem to a more concerned malignancy. An appropriate diagnosis and proper treatment is the need of the hour. [9] A benign-looking thyroid swelling in a regular surgical outpatient department has to be evaluated and managed accordingly. Solitary nodule of the thyroid (SNT) is of greater concern than of multinodular goiter (MNG), but a dominant nodule or a nodule that grows rapidly in an MNG seeks greater attention. Follicular thyroid carcinoma is the common malignancy among benign thyroid swelling [10]. Careful evaluation of the benign-looking thyroid swelling is a necessity. Both papillary and follicular malignancy is 2.5 times more common among women. [11] Mazzaferri EL *et al.* reported a 3.87% incidence of malignancy among MNG patients and 11.5% among SNT. [12] Nanjappa N *et al.* reported 12% malignancy among SNT and 8% among MNG. Both the above groups reported PC among the common presentation followed by FC as in the present study. [13] Nanjappa N *et al.* quoting incidence of malignancy among MNG to be 14.37%, Imad *et al.* reporting an 11.2% malignancy among MNG, most common being PC followed by FC which is comparable to the present study. [14] When Pang HN, *et al* compared thyroid malignancy in SNT and MNG, they noticed 5% malignancy among both SNT and MNG and all the patients detected to have malignancy were females. Malignancy of the thyroid is more common among females. Interestingly, in this study also all the patients found to have malignancy were females probably due to the small sample size and smaller incidence of malignancy. [15]

CONCLUSIONS

To conclude, it is not unusual to have a diagnosis of thyroid malignancy in a clinically benign thyroid swelling. The incidence of such malignancies is significant. Hence, the patients being treated conservatively for benign thyroid diseases should be

followed up regularly. Patients who opt out of surgery should be put on a diligent screening of the swelling and any suspicious change in the swelling has to be tackled. In our study, 58% of Solitary thyroid nodules were found to be malignant. 60% of thyroid cancer occurred in patients between 30- 40 years of age. 58% of malignancies were Papillary carcinoma. Female preponderance was seen with 93 percentage. Among 160 cases of goiter, 88 % were found to be nodular goiter. Suspect Malignancy at extremes of age. 42% of MNG were found to be malignant. 3.75% of thyroid swellings were found to be Hashimoto's thyroiditis.

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