



A STUDY OF PREVALENCE PATTERN OF MALIGNANCY IN SOLITARY THYROID NODULE AT TERTIARY HEALTH CARE CENTRE

Kanchi Aswani

Postgraduate, Department Of General Surgery, Santhiram Medical College, Nandyal, Andhra Pradesh-518501.

Dr. D. Sudheer Kumar Reddy*

Assistant Professor, Department Of General Surgery, Santhiram Medical College And General Hospital, Nandyal, Andhra Pradesh-518501. *Corresponding Author

ABSTRACT **Background:** The common presenting problem like Solitary thyroid nodules (STN) are mostly prevalent in adults. **Aims And Objectives:** To Study prevalence pattern of malignancy in solitary thyroid nodule at tertiary health care centre. **Methodology:** This was a cross-sectional study carried out in the patients of thyroid presenting with solitary thyroid nodule at tertiary health care during the six month period i.e. OCTOBER 2021 to MARCH 2022. All the patients presented with solitary nodule were after written explained consent were enrolled to study. All details of the patients like age, sex noted. All patients with solitary nodule undergone USG and Histopathological evaluation. The findings were entered in excel sheet and analyzed by Excel for windows 10. **Result:** In our study the majority of the patients were in the age group of 30- 40 - 29.41%, 40-50 - 25.49%, 50-60 - 21.57%, >60 - 17.65%, 20-30 - 5.88%. The majority of the patients were Female i.e. 58.82%, Male were -41.18%. On USG - Benign lesions were 84.31%, Suspicious were 5.88%, Malignant were 9.80% on histopathology Benign were 92.16% and Malignant were 7.84% As per histopathology the majority of the lesions were Colloid Goitre - 29.41%, Follicular Adenoma-25.49%, Hashimoto's Thyroiditis- 19.61%, Hemorrhagic Cyst- 15.69%, Papillary carcinoma- 3.92%, Follicular carcinoma- 3.92%, MNG- 1.96%. **Conclusion:** It can be concluded from our study that majority of the patients were in the age group of 30-40 , The majority of the patients were Female As per histopathology, majority of the lesions were Colloid Goitre , Follicular Adenoma, Hashimoto's Thyroiditis etc.

KEYWORDS : Solitary thyroid nodules (STN), Colloid Goitre , Follicular Adenoma

INTRODUCTION

The common presenting problem like Solitary thyroid nodules (STN) are mostly prevalent in adults. Proportions of the patients with thyroid nodules increases along with age ; females have a higher prevalence than males.¹ Ultra sonography (USG) technique nodules identifies Solitary nodule with successfully and success rate of upto 67%, 50% by autopsy and 8% by palpation.^{2,3} Palpable types of nodules have been found to reduce in size with disappearance rate of up to 38%.⁴ The main concern associated with thyroid nodules is their chances of malignancy, thyroid cancers are not common and account only 1% overall cancers and account only 0.5% of overall deaths associated with cancer.⁵ So, we have seen prevalence pattern of malignancy in solitary thyroid nodule at tertiary health care centre.

METHODOLOGY

This was a cross-sectional study carried out in the patients of thyroid presenting with solitary thyroid nodule at tertiary health care during the six month period i.e; OCTOBER 2021 to MARCH 2022. . All the patients presented with solitary nodule were after written explained consent were enrolled to study. All details of the patients like age, sex noted. All patients with solitary nodule undergone USG and Histopathological evaluation. The findings were entered in excel sheet and analyzed by Excel for windows 10.

RESULT

Table 1: Distribution Of The Patients As Per The Age

AGE	NUMBER	PERCENTAGE
20-30	3	5.88
30-40	15	29.41
40-50	13	25.49
50-60	11	21.57
>60	9	17.65
TOTAL	51	100

The majority of the patients were in the age group of 30- 40 - 29.41%, 40-50 - 25.49%, 50-60 - 21.57%, >60 -17.65%, 20-30 - 5.88%.

Table 2: Distribution Of The Patients As Per The Sex

SEX	NUMBER	PERCENTAGE
MALE	21	41.18
FEMALE	30	58.82

The majority of the patients were Female i.e. 58.82%, Male were -41.18%.

Table 3: Distribution of the various lesions of patients as per the

USG and histopathology

USG	No. of Case Histopathology Studies		TOTAL
	MALIGNANT	BENIGN	
Benign	39	4	43(84.31)
Suspicious	3	0	3(5.88)
Malignant	5	0	5(9.80)
Total	47(92.16)	4(7.84)	51(100)

On USG - Benign lesions were 84.31%, Suspicious were 5.88%, Malignant were 9.80% on histopathology Benign were 92.16% and Malignant were 7.84%

Table 4: Distribution of the patients as per the Histopathology

HISTOPATHOLOGY	NO.	PERCENTAGE(%)
Colloid goitre	15	29.41
Follicular adenoma	13	25.49
Hashimotos thyroiditis	10	19.61
Hemorrhagic cyst	8	15.69
Papillary carcinoma	2	3.92
Follicular carcinoma	2	3.92
Multinodular goiter	1	1.96

As per histopathology the majority of the lesions were Colloid Goitre- 29.41%, Follicular Adenoma -25.49%, Hashimoto's Thyroiditis-19.61%, Hemorrhagic Cyst-15.69%, Papillary carcinoma- 3.92%, Follicular carcinoma-3.92%MNG- 1.96%.

DISCUSSION

Solitary thyroid nodules are defined clinically as a localized thyroid enlargement with an apparently normal adjacent gland. According to literature, STN has a higher risk of malignancy than multiple nodules⁶. Because of this reason, surgeons tend to treat them with high degree of suspicion and plan treatment in a systematic manner.

Clinically, STNs are common, being present in up to 50% of the elderly population. The majority of STNs are malignant^{6,12,13}. Preliminary investigation should include careful history and thorough clinical examination and thyroid function tests.¹⁴ With the use of imaging techniques, particularly ultrasound, the chance of detection of thyroid nodules has increased many folds.⁶⁻¹¹ Thyroid cancers occur in approximately 5% of all thyroid nodules independent of their size⁷. The recent data suggest that the incidence of thyroid malignancy is increasing over the years.^{6,8} The occurrence of malignancy is more in

solitary thyroid nodules (STN) compared to multinodular goiter⁶⁻¹³. The preoperative evaluation of thyroid nodules to distinguish between benign and malignant nodules is very important. It helps to avoid unnecessary extensive surgery and potential surgery related adverse effects, such as hypothyroidism, hypocalcemia, and recurrent laryngeal nerve injury⁶. Thyroid nodule refers to a distinct lesion within the thyroid gland that is palpably or radiologically distinct from the surrounding thyroid parenchyma¹⁰. Benign causes of thyroid nodule include the colloid nodule and the classical multinodular goiter. Occasionally, nodularity is noticed in patients with Hashimoto's thyroiditis and graves' disease. Malignant causes of nodules include thyroid cancer, lymphoma as well as metastasis to the thyroid gland¹⁰. Therefore, it is recommended that all thyroid nodules >1 cm in size should undergo evaluation. This includes both palpable and non-palpable nodules, detected by imaging¹⁰. In our study the majority of the patients were in the age group of 30-40 - 29.41%, 40-50 - 25.49%, 50-60 - 21.57%, >60 - 17.65%, 20-30 - 5.88%.

The majority of the patients were Female i.e. 58.82%, Male were - 41.18%. On USG - Benign lesions were 84.31%, Suspicious were 5.88%, Malignant were 9.80% on histopathology Benign were 92.16% and Malignant were 7.84% As per histopathology the majority of the lesions were Colloid Goitre -29.41%, Follicular Adenoma-25.49%, Hashimoto's Thyroiditis- 19.61%, Hemorrhagic Cyst- 15.69%, Papillary carcinoma- 3.92%, Follicular carcinoma- 3.92%, MNG- 1.96%. These findings are similar to Rajendran¹⁰ they found Majority of the patients were between 21-30 years of age. Female:male ratio was about 11.5:1. Swelling in front of the neck was the most common presentation. Most common solitary thyroid swelling was the colloid goitre. Commonest surgery performed was hemithyroidectomy.

CONCLUSION

It can be concluded from our study that majority of the patients were in the age group of 30-40, The majority of the patients were Female As per histopathology, majority of the lesions were Colloid Goitre, Follicular Adenoma, Hashimoto's Thyroiditis etc.

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