

Clinico pathological study of goitre among women in a tertiary government hospital

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Introduction: Diseases of the thyroid gland are one of the commonest endocrine disorders in India as well as in the world. It is estimated that nearly 42 million people in India suffer from thyroid diseases. They may be diffuse or nodular, benign or malignant, euthyroid or hyperthyroid in status. The spectrum of thyroid diseases includes simple goitre, thyroiditis, adenoma, carcinoma, multinodular goiter, hypo or hyperthyroidism and Graves' disease. It is postulated that the incidence of thyroid nodule increases with age, in women, in people with iodine deficiency, and after radiation exposure. **Materials & Methods:** Study done in Government General Hospital Ananthapuramu. Cross sectional descriptive study. Study subjects were included based on inclusion criteria who have given consent for the study. **Results:** A total of 35 women were enrolled for this study. Mean age of the study subjects is 36.51 years. A report suggests a prevalence of 2-6% with palpation, 19-35% with ultrasound, and 8-65% in autopsy data while a prevalence of 4-7% has been estimated in another. **Conclusion:** The prevalence of goitre is different according to the geographical region, age and sex. Majority of the study subjects had Swelling of neck. Among Biopsy reports majority were diagnosed as Multy nodular goiter. We recommend further detailed study in this area to explore further details for the benefit of general population.

Keywords: Hypothyroidism, Ananthapuramu, Thyroid, Goitre

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Introduction

Diseases of the thyroid gland are one of the commonest endocrine disorders in India as well as in the world. It is estimated that nearly 42 million people in India suffer from thyroid diseases. [1] They may be diffuse or nodular, benign or malignant, euthyroid or hyperthyroid in status. The spectrum of thyroid diseases includes simple goitre, thyroiditis, adenoma, carcinoma, multinodular goiter, hypo or hyperthyroidism and Graves' disease. It is postulated that the incidence of thyroid nodule increases with age, in women, in people with iodine deficiency, and after radiation exposure. A report suggests a prevalence of 2-6% with palpation, 19-35% with ultrasound, and 8-65% in autopsy data [2] while a prevalence of 4-7% has been estimated in another [3] The prevalence of goitre is different according to the geographical region, age and sex. [4] Thyroid nodules are common clinical findings and have a reported prevalence of 4% to 7% in the adult population. Thyroid swellings are four times more common in females. FNAC has now supplanted most of the other tests for pre-operative evaluation of thyroid nodules. Thyroid surgeries are most common surgeries especially in the female population. Nearly more than 40% of the postoperative thyroid surgery patients experience significant postoperative pain with pain score above 4 reflecting inadequate analgesia considered independent risk factor. The present study was undertaken to study clinical pathology of goitre among women in a tertiary government hospital.

Materials & Methods

Study done in Government General Hospital Ananthapuramu. Cross sectional descriptive study. Study subjects were included based on inclusion criteria who have given consent for the study. The study period was from January to July 2014. A total of 35 women mean age of 36.51 years were enrolled for this study after obtaining free, written, voluntary informed consent. The study was approved by institutional ethical committee. Participants selection was done by convenient sampling and inclusion and exclusion criteria are as follows.

Inclusion criteria: Willing, women diagnosed with goiter.

Exclusion criteria: Unwilling, severe thyroid disorders.

Data analysis: Data was analyzed by SPSS 20.0. Data was expressed in frequency and percentage.

Results

Results are presented in table no 1 to table no 4. Table no 1 presents Descriptive data on age of study subjects. Table 2 presents Relation of FNAC and age group. Table 3 presents Biopsy and age group. Table no 4 presents Table 4: Chief complaints among study subjects.

Table 1: Descriptive data on age of study subjects

Mean	36.51
Std. Error of Mean	2.403
Median	32.00
Mode	20
Std. Deviation	14.218
Variance	202.139
Range	45
Minimum	20
Maximum	65
Sum	1278

Mean age of the participants is 36.51

Table : 2 Relation of FNAC and age group

FNAC		Age group			Total
		20-40	40-60	>60	
Adenomatous goiter	Count	0	1	0	1
	% of Total	.0%	2.9%	.0%	2.9%
Adenomatous goiter microcystic degeneration	Count	0	1	0	1
	% of Total	.0%	2.9%	.0%	2.9%
Colloid goiter	Count	7	5	1	13
	% of Total	20.0%	14.3%	2.9%	37.1%
Nodular colloid goiter	Count	3	2	1	6
	% of Total	8.6%	5.7%	2.9%	17.1%
Nodular colloid goiter with cystic degeneration	Count	2	0	0	2
	% of Total	5.7%	.0%	.0%	5.7%
Nodular colloid goiter with hemorrhage with cystic degeneration	Count	1	0	0	1
	% of Total	2.9%	.0%	.0%	2.9%
Nodular goiter	Count	3	1	0	4
	% of Total	8.6%	2.9%	.0%	11.4%
Nodular goiter with cystic degeneration	Count	1	0	0	1
	% of Total	2.9%	.0%	.0%	2.9%
follicular adenoma	Count	5	1	0	6
	% of Total	14.3%	2.9%	.0%	17.1%
Count		22	11	2	35

Table 3: Biopsy and age group

Biopsy		Age group			Total
		20-40	20-40	20-40	
Adenoma thyroid	Count	1	0	0	1
	% of Total	2.9%	.0%	.0%	2.9%
Adenomatous goiter	Count	3	2	0	5
	% of Total	8.6%	5.7%	.0%	14.3%
Colloid goiter	Count	0	1	2	3
	% of Total	.0%	2.9%	5.7%	8.6%
Colloid goiter with cystic changes	Count	1	0	0	1
	% of Total	2.9%	.0%	.0%	2.9%
Hashimotos thyroiditis	Count	1	1	0	2
	% of Total	2.9%	2.9%	.0%	5.7%
Micro follicular adenoma	Count	1	2	0	3
	% of Total	2.9%	5.7%	.0%	8.6%
Mixed follicular adenoma	Count	5	0	0	5
	% of Total	14.3%	.0%	.0%	14.3%
Multy nodular goiter	Count	4	1	0	5
	% of Total	11.4%	2.9%	.0%	14.3%
Multy nodular goiter with fibrosis	Count	1	0	0	1
	% of Total	2.9%	.0%	.0%	2.9%
Multy nodular goiter with hashimotos thyroiditis	Count	1	0	0	1
	% of Total	2.9%	.0%	.0%	2.9%
Nodular goiter	Count	2	2	0	4
	% of Total	5.7%	5.7%	.0%	11.4%
Nodular goiter with Degenerative changes	Count	0	1	0	1
	% of Total	.0%	2.9%	.0%	2.9%
Nodular goiter with cystic changes	Count	1	0	0	1
	% of Total	2.9%	.0%	.0%	2.9%
follicular adenoma	Count	3	0	0	3
	% of Total	8.6%	.0%	.0%	8.6%
multy nodular goiter with secondary haemorrhage,no malignancy	Count	0	1	0	1
	% of Total	.0%	2.9%	.0%	2.9%
Count		22	11	2	35
% of Total		62.9%	31.4%	5.7%	100.0%

Table 4: Chief complaints among study subjects

Complaints		Age group			Total
		20-40	20-40	20-40	
Swelling neck	Count	18	10	2	30
	% of Total	51.4%	25.7%	5.7%	82.9%
Difficulty to swallow	Count	4	1	0	5
	% of Total	11.4%	2.9%	.0%	14.3%
Count		22	11	2	35
% of Total		62.9%	31.4%	5.7%	100.0%

Discussion

India has the world's largest goitre belt in the sub-Himalayan region [5].

It has been estimated that 12% of adult population in India have a palpable goitre. [6] The patterns of thyroid diseases observed in the current report are comparable with the available world literature. In the study conducted by Handa et al., the incidence of goitres among thyroid nodules was 57.6%, followed by thyroiditis (27.4%), adenomatous goitre (2.3%), follicular/hurthle cell neoplasm (1.4%) and malignant tumors (3.9%), of which papillary carcinoma was the commonest. [5,7] Another Indian study conducted by Andaleeb et al., in 2002 showed 54.7% of multinodular goitre and 27.6% of follicular lesions. [8].

Bandela et al.[9] from Andhra Pradesh reported 10% prevalence of SCH. Gayathri et al.[10] reported 2.8% prevalence of Sub clinical Hypothyroidism. Possible reason for such variability could be the different upper limit cut-offs used for TSH. The patients were between 17 to 90 years of age with a mean age of 41.49 years.

These findings correlate with studies conducted by Chowdary et al , Hanumanthappa , who suggested occurrence of multinodular goiter in 2 nd and 3 rd decade of life. Our study findings are similar to the findings of Goellner et al, Altavilla et al and Manderkar et al. It was reported that most of the cases one can diagnose number of nodules clinically.

However ultrasonography has an important role in detecting actual number of nodules. This information is very essential for further investigations and necessary management. In 11 patients who have clinically solitary thyroid nodule turned out to be multinodular on USG. Fine needle aspiration cytology is the most important investigation for multinodular goiter.

Pre operative evaluation with ultrasound and FNAC can minimize the extent of surgery to be performed. Most of the times multinodular goiter turned out to be a benign pathology. Histopathological examination of the resected specimen proved useful to exclude malignancy.

Conclusion

The prevalence of goitre is different according to the geographical region, age and sex. Majority of the study subjects had Swelling of neck. Among Biopsy reports majority were diagnosed as Multy nodular goiter. We recommend further detailed study in this area to explore further details for the benefit og general population.

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