

# A study of clinical profile of thyroid swelling at tertiary health care centre

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## Abstract

**Introduction:** Thyroid disorders are the most common endocrine disorder seen in clinical practice and solitary thyroid nodule is one of the common presentations of thyroid disease. **Aims and Objectives:** To Study Clinical Profile of Thyroid Swellings at Tertiary Health Care Centre of Goa. **Materials and methods:** The clinico-pathological study of thyroid swellings was carried out on 50 patients who attended the surgical Out Patient Department of Goa Medical College and were later operated. A detailed clinical history with especial emphasis on age, sex, duration of swelling, Compression symptoms, toxicosis, pain, hoarseness of voice, was obtained. The patients were thoroughly examined. Detail Local examination was done, the type, consistency, retrosternal extension, were noted. Compression symptoms, evidence of thyrotoxicosis were looked for. **Results:** Maximum cases were found in age group of 21 to 30 years and in 31 to 40 age group. Two cases belonged to group of less than 10 years. These patients were 1 year and 1½ years old, 4 patients belonged to the age group of 41 to 50 years and 3 belonged to 51 to 60 years group. Female preponderance was noticed. Out of 50 cases studied 45 were females and only 5 were males. Thus the ratio of sex incidence, male to female noticed to be 1:9. The most common Clinical features were Swelling in the neck, palpitations, loss of weight, nervousness and tiredness were seen to be common complaints. Eighteen patients complained of palpitations, 16 complained of loss of weight. Five patients had hoarseness of voice. Two patients, who had sudden onset of the swelling, had pain in the swelling. In prevalence of Thyroid disease out of total cases 27 cases had non-toxic nodule, 23 cases had multinodular goitre. A single case of had nodular goitre with retrosternal extension. In 3 cases, carcinoma was suspected after investigation. Two patients had diffuse toxic goitre and 2 had nodular toxic goitre. **Conclusion:** Maximum cases were found in age group of 21 to 30 years and in 31 to 40 age group. Female preponderance was noticed. The most common Clinical features were neck swelling, decreased weight palpitations, nervousness and tiredness. In prevalence of disease the most common cases were Thyroid nodule, then nodular non-toxic goitre followed by nodular goitre with retrosternal extension and carcinoma was least common.

**Keywords:** Thyroid Swelling, Nodular goitre, Carcinoma of thyroid, Diffuse toxic goitre, Nodular toxic goitre.

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## INTRODUCTION

Thyroid disorders are the most common endocrine disorder seen in clinical practice and solitary thyroid nodule is one of the common presentations of thyroid

disease. A discrete swelling in an otherwise impalpable gland is termed isolated or solitary nodule of thyroid.<sup>1</sup> The prevalence of thyroid nodule increases from near zero at 15 years to 50% by about 60 to 65 years on sonography. At most 10% of these nodules are palpable even by experienced clinicians.<sup>2</sup> At autopsy, up to 30% of thyroid nodule harbour malignant nodules under 1cm, termed microcarcinomas.<sup>3</sup> A nodule is more likely to be a carcinoma in a man.<sup>4</sup> Many solitary nodules are found asymptotically, but because of their size and position can result in obstructive symptoms of trachea and oesophagus (dyspnoea and dysphagia). The major concern relates to the potentiality for malignancy of solitary nodule. Whether nodule size itself is a risk factor for malignancy is controversial. Fine needle aspiration biopsy is the single most important test in the evaluation

of patients with thyroid swelling.<sup>5</sup> Ultrasound is helpful for differentiating solid from cystic nodules, and for identifying lymphadenopathy.<sup>6</sup>

## MATERIALS AND METHODS

The clinico-pathological study of thyroid swellings was carried out on 50 patients who attended the Surgical Out Patient Department of Goa Medica College and were later operated. A detailed clinical history with especial emphasis on age, sex, duration of swelling, Compression symptoms, toxicosis, pain, hoarseness of voice, was obtained. The patients thoroughly examined. Detail Local examination was done, the type, consistency, retrosternal extension, were noted. Compression symptoms, evidence of thyrotoxicosis were looked for.

## RESULTS

**Table 1:** Age wise distribution of the Patients

Years	Number	Percentage
Upto 10	2	4
10-20	11	22
21-30	16	32
31-40	14	28
41-50	4	8
51-60	3	6

Maximum cases were found in age group of 21 to 30 years and in 31 to 40 age group. Two cases belonged to group of less than 10 years. These patients were 1 year and 1½ years old, 4 patients belonged to the age group of 41 to 50 years and 3 belonged to 51 to 60 years group.

**Table 2:** Sex wise distribution of the Patients

Sex	Number	Percentage
Male	5	10
Female	45	90

Female preponderance was noticed. Out of 50 cases studied 45 were females and only 5 were males. Thus the ratio of sex incidence, male to female noticed to be 1:9.

**Table 3:** Distribution of the Patients with respect to Duration of illness

Years	Number
Upto 1	17
1-5	28
5-10	5

Seventeen out of 50 patients came to Out Patients Department in less than 1 year, since the appearance of the swelling. Twenty-eight patients approached us between 1 to 5 years since its appearance. Only 5 cases reported after 5 years of detection of swelling.

**Table 4:** Distribution of the patients as per the Symptomatology

Symptomatology	Numbers
Swelling	50
Decreased weight	18
Palpitations	16
Nervousness	10
Tiredness	9
Excessive sweating	7
Preference for cold	6
Respiratory difficulties	6
Hoarseness of voice	5
Decreased appetite	5
Dysphagia	4
Dyspnea on exertion	4
Increased appetite	2
Pain	2
Increased weight	1
Preference for heat	1

All the 50 cases of thyroid swelling were examined, and palpitations, loss of weight, nervousness and tiredness were seen to be common complaints, other than neck swelling, eighteen patients complained of palpitations, 16 complained of loss of weight. Five patients had hoarseness of voice. Two patients, who had sudden onset of the swelling, had pain in the swelling.

**Table 5:** Distribution of as per Clinical diagnosis

Type of goitre	Number
Diffusetoxic	2
Nodular non-toxic	19
Nodule	23
Carcinoma	3
Retrosternal extension (alongwith nodular goitre)	1
Toxic nodular	2

Nineteen of the studied cases had non-toxic nodular goitre; 23 cases had a nodule. A single case of had nodular goitre with retrosternal extension. In 3 cases, carcinoma was suspected after investigation. Two patients had diffuse toxic goitre and 2 had nodular toxic goitre.

## DISCUSSION

The endemic goitre is usually seen in age group of 15 to 20 years. Diffuse hyperplastic goitre occurs at puberty in sporadic cases. Nodular goitre appears around 20 to 30 years of age. Diffuse toxic goitre is seen usually in younger women, (Park and Park, 1987). The age incidence noted in our series, showed a increases in incidence in the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> decade of life. Papillary carcinoma occurs at any age, -peak incidence being in 3<sup>rd</sup> and 4<sup>th</sup> decade. Follicular carcinoma had peak incidence in 5<sup>th</sup> decade. (Brown 1981, Young 1981). These findings are similar to Samanta BB<sup>7</sup>. Female preponderance coincides with all other observations Laxman, *et al* in 1979, reported 82 percent incidence in females. W. Osime, *et al* Nigera, reported 71 percent incidence. In this

series 90 percent of cases were females with a male: female ratio of 1:9. Malignancy of thyroid is found to be in ratio of 3:1 in women to men (Illingworth and Dick 9<sup>th</sup> ed). We observed a ratio of 4:1 in women to men with malignancy. These findings are similar to Kaur K<sup>8</sup> In the Framingham Study, 6.4% of women and 1.5% of men had palpable thyroid nodules<sup>11,12</sup> This gender predisposition must be genetically mediated because it cannot be hormonal effect of estrogen as thyroid disease can occur before puberty and long after menopause<sup>13</sup> The female preponderance of thyroid autoimmunity is most likely due to the influence of sex hormones. Estrogen use is associated with a lower risk, and pregnancy with a higher risk for developing hyperthyroidism<sup>14</sup>. In our study, we found that 10% cases were suffering from autoimmune thyroiditis but the cause of prevalence is not known whether it is due to iodine, environmental or stress. In Clinical features Complaints of dysphagia and respiratory difficulties were commonly observed patients with huge nodular goitre this findings is consistent with that of Osime *et al* (1980). Hoarseness of voice, due to recurrent laryngeal nerve involvement, was found in all the cases of carcinoma of thyroid-follicular type. This is a known fact regarding follicular carcinoma and it occurs due to capsular invasion (Bailey and Love, 19<sup>th</sup> edition). One patients had hoarseness due to vocal nodule. All the four patients of thyrotoxicosis, did present with exophthalmos of varying degrees and tremors. In our study 8 percent of the cases were thyroid. In Nigerian study, incidence of thyrotoxicosis was only 4.7 percent and in that of Laxman *et al* (1979) was only 5.9 percent. A ratio of 5 to 10 females to one male has been mentioned (Illingworth and Dick, surgical pathology, 9<sup>th</sup> edition). In our series, all these toxic patients were females. Only 2 patients had pain in the swelling. These patients had recent hemorrhages in the nodular goiter. Sudden increase in the size of the swelling, leads to stretching of the capsule, and pain (Thyroid diseases, i.e. Bayliss). These findings are similar to Rajesh Kakkeri<sup>9</sup> and Shubhangi Dhadke<sup>10</sup>

## CONCLUSION

Maximum cases were found in age group of 21 to 30 years and in 31 to 40 age group. Female preponderance was noticed. The most common Clinical features other than the swelling were palpitations, loss of weight,

nervousness and tiredness. In prevalence of disease the most common cases were non-toxic nodule followed by multinodular goiter. Retrosternal extension and carcinoma was the least common.

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