



A STUDY OF CLINICAL PROFILE OF THYROID SWELLING PATIENTS PRESENTING TO A KONKAN REGION

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ABSTRACT

Objective: To evaluate the clinical profile and management outcomes of patients with thyroid swelling at konkan region. **Methods:** A prospective observational study was carried out over 18 months among 194 patients aged 20–60 years. Evaluation included detailed history, clinical examination, thyroid function tests (TFT), ultrasonography (USG) with TIRADS grading, and fine needle aspiration cytology (FNAC) with Bethesda classification. Surgically managed cases were assessed by histopathological examination (HPE). **Results:** Females predominated (93.3%), with peak incidence in 31–40 years (36.6%). Multinodular goitre was most common (47.8%), and 64% were euthyroid. USG revealed colloid goitre (46.26%), with 72.38% classified as TIRADS II. FNAC showed benign lesions in 86.5%. Among 78 surgical cases, 77.78% underwent hemithyroidectomy, with HPE confirming colloid goitre in 68.51%. **Conclusion:** Thyroid swellings mainly affect middle-aged females, are largely benign, and require systematic clinical, radiological, and pathological correlation for optimal management.

KEYWORDS

Thyroid swelling, Multinodular goitre, FNAC, TIRADS, Bethesda classification, Thyroidectomy, HPE

INTRODUCTION

The thyroid gland is the first endocrine organ to develop in the fetus and is unique for being the largest as well as the only one that can be clinically examined due to its superficial location [1–3]. Thyroid swellings are relatively common, with an incidence of 3–4% among adults. In recent years, their prevalence has been increasing, largely because of dietary influences, particularly goitrogenic food substances, and changing lifestyle patterns [5–7]. Thyroid disorders are broadly classified as functional, structural, or miscellaneous. Structural disorders appear as neck swellings, which may include diffuse physiological goitre, nodular lesions, thyroiditis, or malignancy. These swellings can be toxic or non-toxic, the latter being either endemic or sporadic. Endemic goitre is defined when more than 10% of a population is affected [5–7]. In India, nearly 42 million individuals have thyroid disease, especially in coastal and Himalayan regions. Evaluation includes clinical examination, thyroid function tests, ultrasonography, FNAC, and histopathology [10–14]. Thyroidectomy remains the treatment of choice depending on pathology.

MATERIALS & METHODS

A prospective observational study over 18 months included patients (20–60 years) with thyroid swellings after ethics approval (IEC/2022-23/441) and consent. Data on demographics, clinical history, examination, TFT, ultrasound with TIRADS, FNAC with Bethesda, and HPE (surgical cases) were collected and analyzed using SPSS 23

OBSERVATION AND RESULTS

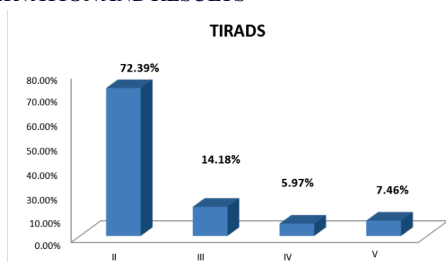


Chart: 1 Distribution of study subjects based on TIRADS grading

BETHESDA GRADING

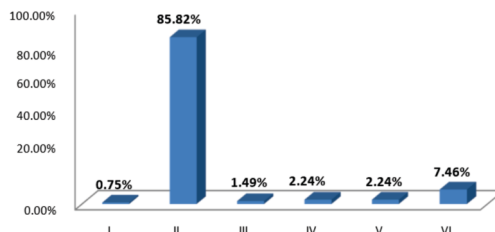


Chart: 2 Distribution of study subjects based on BETHESDA classification

DISCUSSION

Thyroid dysfunction is one of the most common endocrine disorders worldwide, showing a clear female predominance. In India, where thyroid disorders are highly prevalent, accurate diagnostic methods are crucial to distinguish benign from malignant thyroid swellings. This has led to adoption of standardized protocols including clinical evaluation, ultrasonography, fine needle aspiration cytology (FNAC), and histopathological assessment, which together guide conservative or surgical decisions [14–16].

In this study, most patients (36.6%) presented in the third and fourth decades, with a mean age of 39.7 years. These results align with previous reports: Venkates et al. found peak incidence in the third decade, Aravindan et al. reported a mean of 47 years, Bhagora et al. 42.6 years, and Venkates et al. 36.24 years. A marked female predominance was observed (93.3%), comparable to Seema Patel et al. (86%) and Hanushraj et al. (77%), stressing the importance of targeting women for early thyroid screening.

Clinically, multinodular goitre was most common (47.8%), followed by diffuse goitre (34.3%) and solitary nodules (17.9%). Similar patterns were described by Rathod et al. (multinodular goitre 52.72%, diffuse goitre 35.46%, solitary nodules 5.4%). In contrast, Venkates et al., Shrivastava et al., and Tonape observed solitary goitre as more frequent, reflecting regional variations.

Regarding thyroid function, 64% were euthyroid, 24% hypothyroid, and 12% hyperthyroid. Hanushraj R. reported similar findings (40% euthyroid, 26.6% hypothyroid, 23.3% hyperthyroid). In contrast, Dr. Sumaiya F noted a higher euthyroid proportion (88%) with only 4% hypothyroid and 8% hyperthyroid, indicating population-specific differences.

Ultrasonography identified colloid goitre as the predominant pathology (46.26%), followed by multinodular goitre (23.13%), solitary nodules (16.41%) and thyroiditis (14.17%). Seema Patel and Snehl Shukla noted comparable results, though Hanushraj and Dr. Sumaiya F reported differing distributions. TIRADS classification revealed most cases as TIRADS II (72.38%), consistent with Shukla (85%). However, Debanu De found TIRADS III more common, highlighting need for standardized reporting.

Pathologically, benign lesions comprised 86.5%, malignant 7.45%, and 5.4% suspicious. Colloid goitre accounted for 72.38% of benign lesions, followed by thyroiditis (14.17%). Malignancy was mainly papillary carcinoma (5.2%) and poorly differentiated carcinoma (2.23%). These trends agree with Hanushraj, Shukla, and Sengupta. Bethesda classification showed 85.72% as benign (Bethesda II), 5.97% suspicious (Bethesda III–V), and 7.46% Bethesda VI, in line with Debanu De, Dhamecha, and Bhagora. Likewise, FNAC confirmed 86.55% benign and 7.45% malignant, consistent with Shukla and Venkates.

Of 194 patients, 125 were euthyroid, 46 hypothyroid, 23 hyperthyroid. Patients with abnormal function were stabilized before surgery. Among euthyroid cases, 33 underwent surgery, 19 were managed conservatively, while 17 were lost to follow-up. Among hypo/hyperthyroid patients, 21 underwent surgery, 18 refused, and 9 were lost to follow-up.

Surgical management was performed in 78 cases: 77.7% had hemithyroidectomy, 22.2% total thyroidectomy. Shrivastava and Seema Patel reported similar patterns, whereas Venkates found higher total thyroidectomy rates (64%). Postoperative histology confirmed colloid goitre (68.5%) as most common, followed by Hashimoto's thyroiditis (14.8%). Papillary carcinoma was the leading malignancy (12.9%), followed by follicular carcinoma (3.7%). These findings reflect Seema and Trupti's reports, although Sumaiya F documented higher papillary carcinoma prevalence (28%).

Complications were seen in 12 patients. Three had transient hypoparathyroidism, resolved with calcium therapy. Vocal changes from recurrent laryngeal nerve involvement occurred in 12 cases, most recovering with steroids. These results are consistent with Seema Patel et al. [19]

In conclusion, thyroid swellings show a female predominance, occur mostly in middle age, and are largely benign. Multinodular goitre is the commonest presentation, with colloid goitre the leading benign pathology and papillary carcinoma the main malignancy. Systematic evaluation through clinical, radiological, and pathological correlation is essential for optimal management.

CONCLUSION

Based on our study findings and their correlation with existing literature, we conclude that:

1. Thyroid swellings predominantly affect middle-aged females, with peak incidence in the third and fourth decades of life. [24,26,27].
2. Most patients present with multinodular goitre and maintain a euthyroid status. [21,28].
3. Ultrasonography and FNAC are essential diagnostic tools, with the majority of cases showing benign pathology. [12,13,23].
4. The TIRADS and Bethesda classification systems provide valuable standardization in reporting and guiding management. [24,27].
5. Surgical management, when indicated, yields favourable outcomes with minimal complications. [19,25].

These findings reinforce the need for systematic clinical, radiological, and pathological evaluation, supporting existing protocols while emphasizing further research for standardized criteria.

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