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ORIGINAL ARTICLE

Clinico-Demographic Characteristics and Surgical Outcomes of Thyroid Swelling Patient Attended at a Tertiary Care Hospital in Dhaka City

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Abstract

Background: Thyroid swelling was found in different clinical presentation and demographic characteristics. **Objective:** The purpose of the present study was to see the clinical and demographic characteristics as well as the surgical outcomes of thyroid swelling patient. **Methodology:** The study was conducted at Mugda Medical College Hospital, Dhaka during the period of April 2017 to March 2018. The diagnosis of thyroid swelling was based on detailed history, thorough clinical examination and relevant investigations, Ultrasonogram and fine needle aspiration cytology (FNAC). All the patients were undergone surgical management and the outcomes were recorded. All the data were compiled and tabulated in order o obtained a statistical and comprehensive results of the study. **Results:** A total number of 45 patients were recruited for this study after fulfilling the inclusion and exclusion criteria. This study shows age of the patients ranged from 17 years to 65 years. The highest number of cases (35.6%) belongs to the age group of 31 to 40 years followed by 20% in the age group of 21 to 30 years. Female were higher in frequency (95.6) than male (4.4%). Most of the patients (54%) were from poor socio-economic status. The most common indication were nodular goiter (80%), papillary 13.3%, follicular adenoma 4.4%, and medullary (2.2%). In this study most of the findings showed solid mass in the thyroid gland (55.6%). In this series hemithyroidectomy carried out in 68.9% patients and occupied the top of the list followed by subtotal 22.2%. In this study highest number of complications were recurrent laryngeal nerve paralysis (8.9%). **Conclusion:** Young adult female patient is most commonly affected by thyroid swelling and mostly are benign nodular type goiter. [*Journal of Current and Advance Medical Research 2019;6(2):97-100*]

Keywords: Demographic, characteristics, surgical, outcomes, FNAC, thyroid swelling.

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Introduction

Thyroid swelling remains a problem of enormous magnitude all over the world. The problem in clinical practice is to distinguish reliably the few malignant tumors from the many harmless nodules so that a definitive preoperative tissue diagnosis of the malignancy allows planning of appropriate surgery and relevant patient counseling. The prevalence of thyroid swelling ranges from 4% to 10% in the general adult population and from 0.2% to 1.2% in children.[1,2] The majority of clinically diagnosed thyroid swelling are non-neoplastic; only 5% to 30% are malignant and require surgical intervention.[3] In India, thyroid cancer comprises of 1% of all head and neck cancers.[1]

Fine needle aspiration cytology (FNAC), being simple, readily available, reliable, time saving, minimally invasive, cost effective, having high sensitivity and specificity have been applied routinely as a useful and indispensible method to diagnose thyroid lesions. FNAC has allowed a dramatic decrease in unnecessary surgery without thyroid nodular disease, enhancing the percentage of malignant operated nodules over 50%. It is relied upon to distinguish benign from neoplastic or malignant thyroid nodules, thus, influencing therapeutic decisions. However, FNAC has its limitations. Histopathological examination of surgically excised thyroid swelling is the most accurate way to determine the pathology.[1] In this study to the socio-demographic characteristics of thyroid swelling patient under thyroid surgery last 1 year.

Methodology

The study was prospective study conducted at Department of Otolaryngology & Head Neck Surgery, Mugda Medical College Hospital, Dhaka during the period of April 2017 to March 2018. This study includes a total of 45 patients of both sexes, all age groups attending the inpatients and outpatient department. The diagnosis of thyroid swelling was based on detailed history, thorough clinical examination, thyroid profile and relevant investigations. Ultrasonogram and fine needle aspiration cytology (FNAC). Following the FNAC all the patients were subjected to surgery after getting the fitness from anaesthetist. The thyroid nodule which was excised during the thyroidectomy procedure was processed and sent for histopathological examination. All patients were follow up postoperatively. All the data were compiled and tabulated in order o obtained a statistical and comprehensive results of the study. Data were analyzed using computer based programme statistical package for social science (SPSS) for windows version 20.

Results

Age of the patients ranged from 17 years to 65 years. Patients were grouped in age groups of ≤ 20; 21 to 30 years, 31 to 40 years, 41 to 50 years and >50 years & patients in each age group were 8.9% cases; 20% cases; 35.6% cases, 17.6% cases and 15.5% cases respectively.

In this study most of the patients were age group of 31-40 years. Female were higher in frequency (95.6) than male (4.4%). Most of the patients (54%) were from poor socio-economic status (Table 1).

Table 1: Demographic characteristics of the study subject

Characteristics	Frequency	Percent
Age Group		
• ≤20 Years	4	8.9
• 21 to 30 Years	9	20.0
• 31 to 40 Years	16	35.6
• 41 to 50 Years	8	17.6
• >50 Years	7	15.5
Mean±SD	37.75±12.25	
Range (years)	17-65	
Gender		
• Male	2	4.4
• Female	43	95.6
Socio-economic		
• Poor	43	95.6
• Middle	2	4.4

Maximum (60%) duration thyroid swelling were ≤5 years; however, 35.6% cases were found in 6 to 10 years and 4.4% cases were found in more than 10 years (Table 2).

Table 2: Duration of thyroid swelling

Duration	Frequency	Percent
≤5 years	27	60.0
6 to 10 years	16	35.6
>10 years	2	4.4
Total	**45**	**100.0**

In this study the thyroid swelling were diagnosed by FNAC and it had been found that majority (84.45%) were benign and (15.6 %) were malignant (Table 3).

Table 3: Diagnosis of FNAC in Thyroid Swellings

Diagnosis	Frequency	Percent
Benign	38	84.4
Malignant	7	15.6

In this study most of the findings showed solid mass in the thyroid gland (55.6%) (Table 4).

Table 4: Diagnosis of USG in Thyroid Swellings

USG Findings	Frequency	Percent
Single nodule	15	33.3
Multiple nodule	30	66.7
Solid	25	55.6
Cystic	4	8.9
Mixed	16	35.6

The most common indication were nodular goiter (80%) then papillary 13.3%, follicular adenoma 4.4%, and medullary (2.2%) (Table 5).

Table 5: Diagnosis of Thyroid Swelling

Diagnosis	Frequency	Percent
Nodular goiter	36	80.0
Follicular adenoma	2	4.4
Papillary carcinoma	6	13.3
Medullary	1	2.2

In this series hemithyroidectomy carried out in 68.9% patients and occupied the top of the list followed by subtotal 22.2% (Table 6).

Table 6: Type of Surgery performed among the Study Population

Diagnosis	Frequency	Percent
Hemithyroidectomy	31	68.9
• Right	22	48.9
• Left	9	20.0
Subtotal	10	22.2
Total thyrodectomy	4	8.9

In this study highest number of complications were recurrent laryngeal nerve paralysis 8.9% each followed by hypocalcaemic tetany 4.4% (Table 7).

Discussion

Thyroid surgery performed by surgeons specialized in this type of surgery improves the results and decreases the complication rate[4]. Surgical difficulties are essentially related to identification of the recurrent laryngeal nerve. In the present study, all the patients presented with swelling in front of the neck mostly non-tender.

Table 7: Compilation after Surgery among the Study Population

Complication	Frequency	Percent
Recurrent laryngeal nerve palsy	4	8.9
• Right	3	6.7
• Left	1	2.2
Hypocalcaemic Tetany	1	2.2
None	40	88.8

In this study shows most of the patients were age group of 31-40 years, mean age being 37.75 years. Similar prevalence has been observed in the prospective studies by Rahman et al[4], Sengupta et al[6] and Imad et al[7] where the prevalence was highest in the middle age group 3rd and 4th decades. Study by Hanumanthappa et al[5] reported an incidence of 35% in the age group 21-30 years and 30.0% in the age group 31-40 years. Meticulus surgery and judicial use of diathermy can reduce recurrent laryngeal nerve injury.

It was observed that in the present study, female were higher in frequency (95.6) than male (4.4%). Bombil et al[8] reported that out of 162 cases, 139 cases (85.8%) were females and 23 cases (14.2%) males. In a study by Ahamed et al[9] of 105 cases, 90 were females and 15 were males.[9] Also, in a prospective study of 854 Danish Patients (10) 726 (85%) were females and 128 (15%) were males.

Majority of our patients (34%) presented within ≤5 years duration. Only 4.4% patients presented at or above 10 years, 35.6% of patients presented within 6 to 10 years. All the patients presented with swelling in front of the neck. Most of the studies reviewed also reports that swelling is the most common complaint at the time of presentation followed by complaints of pressure symptoms like dysphagia and breathlessness[4,5,10].

In this study shows the most common surgery performed was hemithyroidectomy in 68.9% of patients and 22.2% subtotal thyroidectomy. A study by Mattioli et al[11] subtotal thyroidectomy was shown to be as an adequate surgical intervention for MNG. Also, a study by Lopez et al[12] has shown that bilateral subtotal thyroidectomy was the best treatment for MNG. In a recent review by Masslot

et al[13] they preferred total thyroidectomy over the subtotal thyroidectomy.

On histopathological analysis of the present study of 45 cases, 80.0% were nodular goiter and 2.2% were medullary. Malignancy was diagnosed in 4.4% of patients, though the FNAC findings were benign (95.6%). However, no metastasis was detected. As previously discussed in the methodology, non availability of the ultrasound guided FNAC was one of the limitation of the study. An important limitation of FNAC in MNG is the possibility of a false negative result because the needle may not go into the nodule which needs testing[14]. Rahman et al[14] reported 3.87% incidence of malignancy among MNG patients. Altae et al[15] reported the incidence of thyroid tumours to be 11.8% and those with malignant changes to be of 5.5%. Though the present study is comparable to the above studies, the study conducted by Hanumanthappa[5] quoting malignant incidence of 10%. Gandolfi et al[16] quoting 13.7% incidence of malignancy among MNG; Kurshid et al[17] quoting incidence of malignancy among MNG to be 14.37% is a reason for concern.

Out of 45 cases, 11.1% patients developed complications. This findings nearly consistent with the study Moulton et al[18] (14.2%), Asaduzzaman[19] (12.5%). Among the complications (8.9%) developed recurrent laryngeal nerve paralysis. Iqbal et al[20] found only one recurrent laryngeal nerve damage out of 111 cases of thyroidectomy (0.9%). Another Bangladeshi study by Rahman revealed a 4% incidence of recurrent laryngeal nerve injury[21].

Conclusion

This study shows the thyroid swelling patients were higher in young and middle age group, female and poor socio-economic background. Hemithyroidectomy and subtotal thyroidectomy is the preferred surgery. Complications like recurrent laryngeal nerve palsy and hypocalcaemic tetany were seen in surgery.

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