

# To Determine the Clinical Pattern and Postoperative Complications of Thyroidectomy

Shahida<sup>1</sup>, Adnan Ahmed<sup>2</sup> and Shahnawaz Abro<sup>1</sup>

## ABSTRACT

**Objective:** To assess the postoperative complications in patients underwent thyroidectomy at tertiary care Hospital

**Study Design:** Prospective case series study

**Place and Duration of Study:** This study was conducted at the Departments of General Surgery of LUH Hyderabad from October 2014 to September 2015.

**Materials and Methods:** All the cases with diagnosis were thyroid disorder and underwent thyroidectomy were selected in the study. Cases above 25 years of age were included. Patients were prepared for the surgery after counseling regarding surgical and post-operative complications. All the surgeries were carried out by senior surgeons along with cooperation of the ENT surgeons. After surgeries patients were taken under follow-up and all developed postoperative complication were recorded in the proforma.

**Results:** Mean age of the patients was 44.50±5.23 years. 31(43.66%) patients were male while 40(56.34%) were female. 100% patients had neck swelling, 8.45% had pain, 9.85% had swallow difficulty and 7.04% had breathing difficulty while others less common complaints were found in 14.08% patients. Regarding post-operative complications, 4.22% patients had transient RNA palsy, 5.63% patients had hypocalcemia, 3.44% had dysphagia, 4.22% had infections, while 1.40% had seroma.

**Conclusion:** Presentation of neck swelling was in all cases, and most common postoperative complications were hypocalcemia, transient RNA palsy and superficial infection, female gender is most common.

**Key Words:** Thyroidectomy, clinical presentation, postoperative complications

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## INTRODUCTION

Term goiter is utilized to represent as enlarge in size of the thyroid gland.<sup>1,2</sup> Disorders of the thyroid constitute the 2<sup>nd</sup> most regular endocrine illness taking after DM.<sup>2</sup> Incidence of nodular goiter and the anatomy of thyroid expanded in areas with incessant Iodine Deficiency. It has been archived that the thyroid changes with Iodine Deficiency in the early stages by diffuse hyperplasia, while chronic introduction to iodine deficiency brings about nodular hyperplasia, expanded colloid content and expanded follicular cell height. Surgical removal of the thyroid is a stand out amongst the most frequent surgeries performed in iodine 5 to 7 regions inadequately.<sup>2</sup> All inclusive, the Total Goiter Prevalence (TGP) in the overall population is assessed to be 15.8%, differing between in America 4.7% and in Africa 28.3%. In the 6–12 years children studies reported different prevalence. As well as in southern Sudan 22.3%, in Rajasthan 11.4% Rajasthan, and in India 20.5%.<sup>3-5</sup>

In the 6–12 years children another study reported prevalence as in 39.9% in Ethiopia in year 2005, and noticeable goiter in 12.2%.<sup>6</sup> The predominance of goiter was higher in women than men in various reviews in the world.<sup>3,5,7</sup> In Pakistan goiter incidence among the general population 16.6% at Baltistan, North East Pakistan. In North incidence in males 20.4%, in women 28.1% and in the south in men as 13.9% and in women is 21.2%.<sup>8,9</sup> In another Pakistani study reported that 140 cases underwent different surgical techniques of thyroidectomy, out of them 15 found with carcinoma, furthermore out of 105 cases having multinodular goiter showed 7.6% carcinoma.<sup>10</sup> In study conducted in the Nawabshah also found different type of cancer in cases with multinodular goiter 52% in women and 45% in men.<sup>10</sup>

Surgical treatment is common treat for neck surgeries. Post-operative complications for example, hypoparathyroidism and RLNI and bleeding take a big part from all complications.<sup>11</sup> However, in the multiple and different complications are reported. Recurrent LN was 1<sup>st</sup> disclosed and named through the Galen in 2<sup>nd</sup> century.<sup>12</sup> Higher risk nerve injury is right sided due by its wide ranged anatomical deviations as compare to left side. In the some new studies stated that vocal cord paralysis through iatrogenic injury of RLNI is the commonest event in thyroid surgeries. Though several techniques has been introduced for prevention nerve injury, till now prevalence of the recurrent LNP differ

<sup>1</sup>. Department of General Surgery / Radiology<sup>2</sup>, LUMHS, Hyderabad.

Correspondence: Dr. Adnan Ahmed, Assistant Professor of Radiology<sup>2</sup>, LUMHS, Hyderabad.

Contact No: 0313 2851728

Email: dr.sajidarain@gmail.com

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between 1.5-14%.<sup>13</sup> This study has been conducted to evaluate the postoperative complications in patients underwent thyroidectomy at tertiary care Hospital.

**MATERIALS AND METHODS**

Current prospective case series study has been done in the general surgery department of LUH Hyderabad. Duration was 6 months from November 2014 to May 2015. Cases with age more than 20 years and both genders were incorporated. All the patients with presentation of thyroid disorder were included. After admission complete clinical examination and routine laboratory investigations were done. Surgeries were carried out by senior surgeons. All the patients were discharged from the ward on stable condition, and advised for complete follow-up at OPD of general surgery; follow-up days were selected according to patient's condition. Patients were not come in the follow-up those were excluded from the study. All the postoperative complications during postoperative hospital stay and during follow-up at OPD were entered in the proforma. All data was analyzed in the SPSS version 16.

**RESULTS**

Mean age of the patients was 44.50+5.23 years. 31(43.66%) patients were male while 40(56.34%) were female. Table 1.

Regarding clinical presentation, 100% patients had neck swelling, 8.45% had pain, 9.85% had swallow difficulty and 7.04% had breathing difficulty while others less common complaints were found in 14.08% patients. Fig:1.

38.02% patients had total thyroidectomy while 61.98% patients had subtotal thyroidectomy. Fig:2

Regarding post-operative complications, 4.22% patients had transient RNA palsy, 5.63% patients had hypocalcemia, 3.44% had dysphagia, 4.22% had infections, while 1.40% had seroma. Table:2.

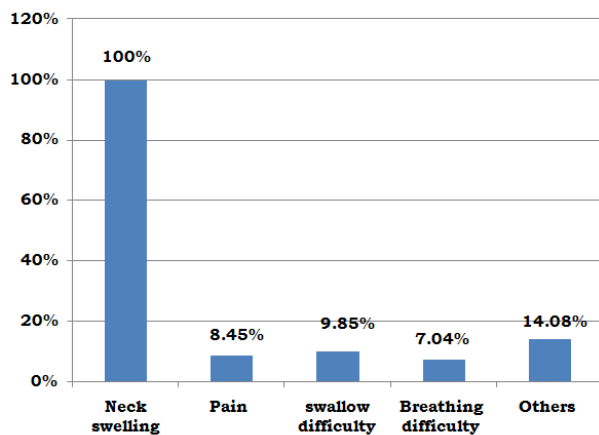


Figure No. 2: Clinical presentation n= 71

Table No.1: Patients according to age and gender distribution n=71

Basic characteristics	Numbers/ Percentage
Age (mean+SD)	44.50+5.23 years
<b>Gender</b>	
Male	31(43.66%)
Female	40(56.34%)

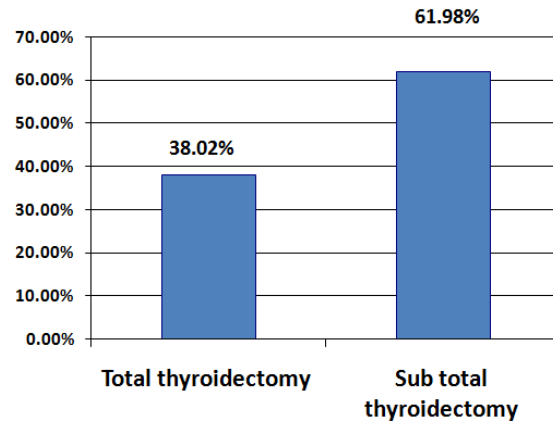


Figure No.2: Type of thyroidectomy n= 71

Table No.2: Postoperative complications after thyroidectomy n=71

Post-operative complications	Frequency (%)
<b>RNA palsy</b>	
Transient	03(4.22%)
Permanent	01(1.40%)
<b>Hypocalcemia</b>	04(5.63%)
Dysphagia	01(3.44%)
Infection	03(4.22%)
Haematoma	01(1.40%)
Granuloma	01(1.40%)
Seroma	02(1.40%)

**DISCUSSION**

This study has been carried out to determine postoperative complications of thyroidectomy. Patient's mean age was 44.50+5.23 years. 31(43.66%) patients were male while 40(56.34%) were female. Comparable findings regarding age and gender were found in the study of Gupta A et al<sup>14</sup>as; majority of cases 51% were between age as 21-40 years and females predominated as 77%. In some other series of as Singh P et al.<sup>15</sup> stated mean age 47 years and Islamet al.<sup>16</sup> also found comparable age range. Female's predominance with thyroid disorder may due to presence of estrogen receptors in tissues of the thyroid.<sup>17</sup>

In our series according to clinical pattern 100% patients had neck swelling, 8.45% had pain, 9.85% had swallow difficulty and 7.04% had breathing difficulty while

others less common complaints were found in 14.08% patients. In the favor of this study Gupta A et al<sup>14</sup> also reported that all patients were with presentation of neck swelling following by in 3% patients had cervical lymphadenopathy, 1% cases had dysphagia, dyspnea in 1 cases and hoarseness had in 1 cases also. in another study of Prakash A, et al<sup>18</sup> seen comparable findings regarding clinical presentation as well as 95.55% patients was neck swelling. In contrast of our study Sachdeva HS, et al<sup>19</sup> found greater prevalence of dysphagia in 33.33% cases and presentation of dyspnea in 26.66% cases, this may due to our study sample size was very short as compare to that study. While Godinho-Matos L, et al<sup>20</sup> found similar clinical presentation as neck swelling in 100% cases, 4% cases with dysphagia, 3% were with dyspnea, 8% pain while hoarseness of voice was found in the 3% cases.

In our series regarding post-operative complications, 4.22% patients had transient RNA palsy, 5.63% patients had hypocalcemia, 3.44% had dysphagia, 4.22% had infections, while 1.40% had seroma. In the comparison of our study Khanzada TW et al<sup>21</sup> reported that overall postoperative complications were 10.7%, without mortality and further he reported that hypocalcaemia was the major complications of thyroidectomy and minimum rate was found of RLN injury and the bleeding. Prevalence of RLN injury is still not known exactly unknown. While Khanzada TW et al<sup>21</sup> reported that permanent RLN palsy was in 1.4% cases. Some other studies also found similar findings as our study regarding hypocalcaemia and RLN injury.<sup>22-24</sup> In our study infection found in the 4.22% of cases. On other hand Khanzada TW et al<sup>21</sup> demonstrated infection only in 1 (0.7%) cases. In another study also found similar findings as well as in 2% of the cases.<sup>25</sup> In our study event of postoperative mortality was not made. As well as similar findings were noted in the studies of Lombardi CP et al<sup>22</sup> and Khanzada TW et al<sup>21</sup>.

## CONCLUSION

Presentation of neck swelling was in all cases, and most common postoperative complications were hypocalcemia, transient RNA palsy and superficial infection, female gender is most common. Few studies showed big prevalence of complication as compare to our study. More big sample studies are needed to determine this difference.

**Conflict of Interest:** The study has no conflict of interest to declare by any author.

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