

# Complications of Laryngeal Surgery

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## ABSTRACT

**Objective:** To study the Complications of Laryngeal Surgery

**Study Design:** Experimental Study

**Place and Duration of Study:** This study was conducted at the Idris Teaching Hospital Sialkot Medical College Sialkot from Jan 2016 to Jan 2019.

**Materials and Methods:** This study include 100 patients of laryngeal carcinoma. Their history was taken on performa and lab tests were advised to all of the patients . The study was conducted in Idris Teaching Hospital Sialkot Medical College Sialkot. Written informed consent was also taken from every patient. The permission of ethical committee was also considered to conduct this research work and publishing in medical journal.

**Inclusion Criteria:** All the patients of laryngeal carcinoma were included in this study

**Results:** Laryngeal cancer is basically disease of elderly. In this study largest number of lesions (12/30) occurred in six decade of life ,This accounts for 40% of all the cases as shown in table no 1.Overall age incidence range between 45-80 years in another study the maximum incidence 34.5% was in the fifth decade of life<sup>2</sup>The world wide maximum figure approximately 40% occur in 51-60 years of age .It coincides with the findings of present study. Laryngeal cancer has clear cut preponderance for male population among the 30 patients consecutively undergoing laryngeal surgery for treatment of squamous cell carcinoma larynx, 27 patients were found to be male (90%) and remaining 3 female patients (10%).Thus male to female ratio was 9:1 as shown in table no 1.

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**Conclusion:** It was observed that there were definite complications during laryngeal surgery

**Key Words:** Complications, laryngeal surgery

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## INTRODUCTION

Like any surgical procedure laryngeal surgery can also face number of complication.

In Addition to complication like those of anesthesia, wound infection, hemorrhage, systemic complications

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and keloid formation, laryngeal surgery can result into complication related to anatomy and function of the region. These depend on the type of surgical procedure done. Total laryngectomy can result in to stomal stenosis, pharyngeal stenosis, tracheal crusting and formation of mucocutaneous and trachea esophageal fistula<sup>1</sup>. In 55 cases local study that included 37 cases (67.3%) total laryngectomies and 7 cases(12.7%) conservation surgeries,13 patients (23.6%) developed some form of complication. These Complication included stomal stenosis six cases (%). Pharyngeocutaneous fistula 3 cases (%) tracheosophaygeal fistula 1 case (%) peritonitis 1 case (%) pneumothorax 1 case (%) Post operative bleeding 1 case (%)<sup>2</sup> Partial Laryngeal resection shows complication depending upon type of procedure. They can be classified broadly into general ( related to any major head and neck procedure) and specific(related to specific conservation procedure) specific complication

in this group include glottic, insufficiency, aspiration, poor voice, swelling problems and formation of webs. In literature ratio of complication supraglottic varies from 10% to 50 %.<sup>4,5</sup> Similarly Complication rate vertical partial laryngectomy is also very variable but generally lower than supraglottic one. It varies from 1.5% to 26% <sup>6</sup>Rate of complications is usually greater in patients in whom radiation is combined with surgery. Rate of mortality in peri operative period is found in up to 6 % cases. It usually occur due to hemorrhage, cardiac dysfunction, acute pulmonary edema, septicemia and infection of wound.<sup>7,8,9,10,11</sup>

## MATERIALS AND METHODS

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## RESULTS

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The world wide maximum figure approximately 40 % occur in 51-60 years of age. It coincides with the findings of present study. Laryngeal cancer has clear cut preponderance for male population among the 30 patients consecutively undergoing laryngeal surgery for treatment of squamous cell carcinoma larynx, 27 patients were found to be male (90%) and remaining 3 female patients (10%). Thus male to female ratio was 9:1 as shown in table no 1. This ratio was 5.1:1<sup>2</sup> the world wide male to female ratio varies from 5 - 20 : 1. In UK and US this tumor is 5-6 times more common in male than in female. In US ratio has decreased from 12:1 to 5:1 over the last 20 years<sup>3</sup>

**Table No. 1: Age and Sex Distribution**

Age Group (Years)	Male	Female	Total	Percentage (%)
45-50	5	1	6	20
51-60	11	1	12	40
61-70	9	0	9	30
70-80	2	1	3	10
Total	27	3	30	100

**Table No. 2 : Complication of laryngeal Surgery**

Sr. No.	Complications	Number of patients involved	Percentage (%)
1	Hematoma formation	1	9.1
2	Pharyngeocutaneous fistula	8	72.7
3	Stomal stenosis	1	9.1
4	pharyngealstenosis	1	9.1
Total		11	100

Patients having complication =  $11/30 = 36\%$

## DISCUSSION

General policy to treat laryngeal carcinoma varies from country to country and center to center. Policy in northern Europe and UK is towards radiotherapy in most patients<sup>13,14,15</sup>. Surgery in the form of total laryngectomy is reserved for recurrence<sup>16,17,18</sup>. On other hand in north America and Southern Europe there is obvious tendency for conservative laryngeal procedures<sup>10,19</sup>. Among complication there was hematoma formation 1 patient (9.1%). Pharyngeocutaneous fistula In 8 patients (72.7%), Stomal Stenosis in 1 patient (9.1%), pharyngealstenosis in patient (9.1%). There were 11 patients having complication during laryngeal surgery among 100 patients of laryngeal carcinoma. These findings coincides with study of many authors as shown in results.

## CONCLUSION

It was observed that there were definite complications during laryngeal surgery

### Author's Contribution:

Concept & Design of Study: Saeed Razi  
 Drafting: Javed Qureshi, Salman Imran Butt  
 Data Analysis: Kamran Hamid, Liaquat Ali, Haris Muaaz  
 Revisiting Critically: Saeed Razi, Javed Qureshi  
 Final Approval of version: Saeed Razi

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

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