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TOTAL LARYNGECTOMY: A PROSPECTIVE STUDY IN OUR INSTITUTE.

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ABSTRACT Total laryngectomy is one of the options for treating laryngeal malignancies. It is radical procedure where the entire larynx is removed and in advanced SQCC stage 1,2 where partial laryngeal surgeries or radiotherapy has failed, this procedure is used as a salvage procedure. Common complications were found to be wound infections, pharyngo cutaneous fistula, flap necrosis, hematoma and carotid blow - out. This article is a clinical study conducted in our KAPVmedical college during the period of January 2015 to March 2017. All the patients who underwent total laryngectomy and their complications which occurred during the study period were included.

AIM: To study aetiology and complications both immediate and late in total laryngectomy and their management in our institution.

KEYWORDS : Total laryngectomy, Squamous Cell Carcinoma(SQCC) , Complications, Pre - laryngectomy tracheostomy

INTRODUCTION:

Most common head and neck malignancy worldwide is carcinoma of larynx. The risk factors include nicotine and alcohol use. In the recent years' incidence rate has increased among women due to use of nicotine products and exposure to carcinogens. Laryngeal cancer can cause breathing difficulties and loss of speech, change in voice. Treatments include radiotherapy and surgery according to staging from 1 to 4, which may be curative as well as palliative.

In the past 10 years, chemo-radiotherapy became popular without any significant differences in survival rates. However, in advanced SQCC where radical surgery is needed and in patients with poor lung reserve and as risk of aspiration is high, total laryngectomy is recommended. However, this surgery is often accompanied by large number of complications and has been proved to have detrimental effects on the patient's Quality of Life.

In stage 3-4 laryngeal cancer where people would otherwise undergo total laryngectomy , chemo radiation seems to be the option for preserving larynx and speech.

TOTAL LARYNGECTOMY:

This procedure results in removal of entire larynx. The trachea is then brought up through the skin of the front of your neck as a stoma. This is called a **tracheostomy**. Since the entire larynx is removed, the patient will no longer be able to speak as they used to, but the should be trained with speech therapy . The connection between the throat and the esophagus is usually not affected, so the patient can swallow food and liquids just as they did before the operation.

Cancer of the larynx can spread to the lymph nodes in the neck. In case of lymph node spread, lymph nodes may be removed from the patient's neck. This operation, called a **neck dissection**, is often done at the same time as the surgery to remove the main tumor. All the lymph nodes which are involved in metastasis should be removed.

OBJECTIVE:

To analyse aetiology and complications both immediate and late in total laryngectomy and their management in our institution.

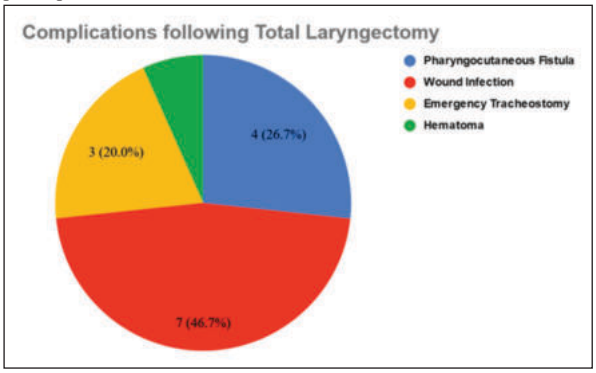
SETTING: ENT Department, Trichy Medical College

MATERIALS AND METHODS:

All the patients who underwent Total laryngectomy during the period of study were included. Patient factors including age, sex, tumour size, extent, metastasis were added. Their medical records were reviewed and survival information was gathered.About 30 people were diagnosed to have laryngeal carcinoma and 19 of them were advanced malignancies which needed surgical intervention. In total 15 patients between the age group 30 to 70 years underwent total laryngectomy during the period of study. Since our medical college hospital is a tertiary care centre, most of the patients were either referred or came late. hence most of the patients were planned for total laryngectomy/ partial laryngectomy and reconstruction surgeries. Since 3 patients came with stridor underwent emergency pre-laryngectomy tracheostomy.

RESULTS AND DISCUSSION:

Patients with various comorbidities had a negative impact and predisposed to post-operative complications in patients underwent surgery. Patients treated with primary chemoradiation and palliative chemotherapy underwent more complications than with laryngectomy. Most commonly found complications associated with total laryngectomy in our institution were wound infections and pharyngocutaneous fistula. Aetiology was mainly anemia, poor hygiene and protein energy malnutrition, preoperative radiotherapy, preoperative chemotherapy, old-age, stage 3-4 cancer, alcohol abuse and also delayed referral were found to play a major role in immediate post-operative complications, even though patients were given higher antibiotics and good wound care. Low albumin,diabetes mellitus,preoperative radiation was independently associated with post-operative wound infection.



Preoperative radiotherapy was found to be the predictor of pharyngo cutaneous fistula which was managed conservatively. Positive surgical margins, extended hypo pharyngeal mucosal excision and low HB were also attributed for its development. In the retrospective study of pharyngocutaneous fistula, most of the histopathological diagnosis was SQCC Most of them, who underwent for total laryngectomy in stage 4, to whom primary closure was done with 3-0 polyglactin suture and primary trachea oesophageal puncture was done. As per Hogan and Dedo study, fistula was diagnosed from 4rd to 11th postoperative day.There were 4 minor and 3 major fistula (7 weeks). The hospital stay time varied from 1 to 4weeks. Resection of excess pharyngeal mucosa due to more extensive tumours was seen in our study and was found to

have significant effects that seem to increase the rate of pharyngocutaneous fistula. Radiotherapy produces more fistulas compared to chemotherapy where complications were poor wound healing and dehiscence.

Preoperative tracheostomy remains to be an adverse prognostic indicator in patients undergoing laryngectomy 10. In our study 4 patients underwent emergency tracheostomy before laryngectomy since they presented with stridor. All of them has pharyngocutaneous fistula which correlates with previous study of Paydanfar J

CONCLUSION:

In our institution, since many comorbidities were associated with patients, wound infection and pharyngocutaneous fistula were the commonest complications following surgery. Previous treatment with radio and chemotherapy were also determining factors for complications and survival rate 11,12. Due to late presentation, some patients had to be taken up for emergency tracheostomy which also is an adverse prognostic index. Early identification and assessment of risk factors can greatly reduce associated complications.

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