

Duration Between Tracheotomy and Laryngectomy in Tracheostomized Patients

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ABSTRACT

Objective: To study the Duration between Tracheotomy and laryngectomy in Tracheostomized Patients

Design of Study: Experimental / Observational study

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

Materials and Methods: Fifty seven patients were included in this study and Duration between Tracheotomy And laryngectomy in Tracheostomized Patients were recorded. The demographic data was also noted down on the designed performa. The written informed consent was taken before the start of study . The permission of Ethical Committee was considered before collection of data and publishing in medical journal.

Results: With margin of 5 days, the duration between tracheotomy and laryngectomy in tracheostomized patients , the patients were 03(5.26%), with margin 7 days the number of patients were 09(15.78%) , With the margin of 10 days the patients were 09(15.78%), Wit margin of 12 days the patients were 09(15.78%) , with the margin of 13 days the patients were 03(5.26%) , with the margin of 15 days the patients were 06(10.52%) , with the margin of 17 days the patients were 03(5.26%)0, with the margin of 30 days the patients were 09(15.78%) , with the margin of 60 days the patients were 03(5.26%) , with the margin of 90 days the patients were 03(5.26%) were found for the duration between tracheostomy and laryngectomy in tracheostomaized patients. At the age of 35-40 years , there were 15(29.41%) Male and 01(16.66%) female, at the age of 41-55 years there were 17(33.33%) Male and 02(33.33%) female, at the age of 56-66 there were 16(31.37%) Male and 02(33.33%) Female , at age above 67 years there were 3(5.88%) Male and 01(16.66%) female were found for the duration between tracheostomy and laryngectomy in tracheostomaized patients.

Conclusion: It was concluded that during different periods duration between tracheostomy and laryngectomy in tracheostomaized patients were different.

Key Words: Tracheotomy, Laryngectomy, Tracheostomized patients.

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INTRODUCTION

Stress from surgery like tracheostomy and laryngectomy disturbs patients' sleep¹⁻³. Even minor surgery like tracheostomy or laryngectomy can disrupt sleep with a reduction of total sleep and REM sleep⁴. "Major surgery curtails sleep even further. REM sleep on the first and second post-operative night is virtually eliminated^{5,6}". "Knill et al⁷ reported that the REM sleep reappeared thereafter and even increased to a level greater than the pre-operative amount.

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In the post-operative period, hypoxemia is another well-known threat⁸⁻¹⁰. The hypoxemia in this stage is predominantly caused by a corruption of the airway patency, i.e. obstructive apnea^{11,12}. The obstructive apnea is often observed in the patients during REM sleep after major surgery¹³⁻¹⁵. Glossectomy and laryngectomy are major surgical procedures." "These procedures are stressful to patients and may not only simply disrupt their sleep, they simultaneously interfere with the air flow in the upper airway because of surgery and post-operative edema". "Hence, we suspected that after glossectomies and laryngectomies, patients could show disturbance as described, and have studied their breathing during the perioperative nights using an apnea monitor".

MATERIALS AND METHODS

This study was conducted at Idris Teaching Hospital Sialkot Medical College Sialkot from Jan 2016 to Jan 2019. Fifty seven patients were included in this study and Duration between Tracheotomy And laryngectomy in Tracheostomized Patients were recorded. The demographic data was also noted down on the designed performa. The written informed consent was taken before the start of study . The

permission of Ethical Committee was considered before collection of data and publishing in medical journal.

RESULTS

With margin of 5 days, the duration between tracheostomy and laryngectomy in tracheostomized patients, the patients were 03(5.26%), with margin 7 days the number of patients were 09(15.78%), With the margin of 10 days the patients were 09(15.78%), With margin of 12 days the patients were 09(15.78%), with the margin of 13 days the patients were 03(5.26%), with the margin of 15 days the patients were 06(10.52%), with the margin of 17 days the patients were 03(5.26%), with the margin of 30 days the patients were 09(15.78%), with the margin of 60 days the patients were 03(5.26%), with the margin of 90 days the patients were 03(5.26%) were found for the duration between tracheostomy and laryngectomy in tracheostomized patients.

At the age of 35-40 years, there were 15(29.41%) Male and 01(16.66%) female, at the age of 41-55 years there were 17(33.33%) Male and 02(33.33%) female, at the age of 56-66 there were 16(31.37%) Male and 02(33.33%) Female, at age above 67 years there were 3(5.88%) Male and 01(16.66%) female were found for the duration between tracheostomy and laryngectomy in tracheostomized patients.

Table No. 1: Duration between Tracheostomy and laryngectomy in Tracheostomized Patients.

Number of days	Number of patients	Percentage
05	03	5.26%
07	09	15.78%
10	09	15.78%
12	09	15.78%
13	03	5.26%
15	06	10.52%
17	03	5.26%
30	09	15.78%
60	03	5.26%
90	03	5.26%
Total	57	100%

Table No. 2: Age And Gender Distribution

Sr. No	Age(years)	Male	Female
1	35-40	15(29.41%)	01(16.66%)
2	41-55	17(33.33%)	02(33.33%)
3	56-66	16(31.37%)	02(33.33%)
4	67 and above	3(5.88%)	01(16.66%)
total		51(100%)	6(100%)

DISCUSSION

“A high value of the Sleep Apnea Index was seen in the patients after extubation. Before the extubation, it was not seen. Although we suspected there would be

frequent central apnea before the extubation because the remaining anesthetic agents, epidural morphine and midazolam hydrochloride may all have participated in factors for central sleep apnea, our suspicion was unfounded”. “It is noticeable, therefore, that central apnea was found to be negligible after glossectomies, pharyngo-laryngo-esophagectomies and laryngectomies, as reported in other operations^{5,6}. With assurance of airway and secured sleep with midazolam, all the patients slept well during the night following surgery”. “Mean hemoglobin saturation of oxygen measured by pulse oximeter. All recorded values were averaged to calculate the mean, except when we considered that the changes were caused simply by the patient's movements during the monitoring and excluded from the average calculation. The value of the patients who were not tracheostomized was compared with that of the patients who were tracheostomized. * $P < 0.05$, unpaired Student's *t*-test”.

“The post-operative sleep apnea after the glossectomy was obstructive sleep apnea. The results coincide with previous reports^{11,12}. The glossectomy patients who were extubated the next morning showed an acute rise in sleep apnea frequency and a decrease in mean values in the pulse oximeter. There were frequent temporary hypoxemias after the extubation in the glossectomy patients”. “In the questionnaire on the patient's level of comfort, glossectomy patients reported that they had a dream, a part of which was dreadful. Because they did not receive any sedation on the first operative night and during the days after, it was possible that their REM sleep resumed⁷”. “Study with electroencephalography to elucidate their sleep is preferable to maintain the patient's post-operative condition better in future”. “To keep a free flap viable, the posture of the patients is important. The free flap is fed by the blood circulation through the anastomoses of feeding arteries and draining veins. The patient's posture, when it interferes with the blood circulation, causes a failure of the tissue transplantation. It is preferable that the patients keep a posture in which the local circulation is at its best. In seven extubated patients, we found reports of two skin flaps that had failed, while none out of four with pharyngo-laryngo-esophagectomy had a failed free jejunum flap”. “We need to pursue the relationship between their nightmare and the skin flap failures. To keep the best posture further maintained, a longer more strict sedation may be beneficial for the patients undergoing glossectomies. Comfort of perioperative sleep. The value of the patients who were not tracheostomized was compared with that of those who were tracheostomized. ** $P < 0.01$ in unpaired Student's *t*-test. We conclude that patients with extensive head and neck surgery need at least a comfortable first and second post-operative night with close monitoring to keep them free from discomfort, and the free flap in the best possible condition”.^{13,14}

CONCLUSION

It was concluded that during different periods duration between tracheostomy and laryngectomy in tracheostomized patients were different.

Author's Contribution:

Concept & Design of Study: Javed Qureshi
 Drafting: Saeed Razi
 Data Analysis: Umra Abdul Samid,
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 Revisiting Critically: Javed Qureshi,
 Saeed Razi
 Final Approval of version: Javed Qureshi

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

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