Post-operative sore throat in GA: A Concern

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Background

Post-operative sore throat is a common occurrence following general anaesthesia immediately upon awakening, extending up to 24 h. It is the most common undesirable event after general anaesthesia. Hence, this clinical audit was aimed to reduce this incidence of sore throat by adopting various strategies.

Aim

• To reduce the incidence of post-operative sore throat to half of its previous incidence

• To minimize intubation attempts and laryngoscopy duration

• To monitor cuff pressure intra-operatively at periodic intervals

• To improve patient comfort at the end of surgery by providing smooth extubation.

Methods

All patients posted for surgeries under general anaesthesia planned for routine tracheal intubation with endotracheal tubes. Surgeries that lasted less than 4 h were included. Patients who underwent nasal intubation and supraglottic airway devices were not included. Various factors like the size of the endotracheal tube, attempts of intubation, and cuff pressure were considered.

1) Endotracheal tube size was standardized, using 8.5 (OD-11.6) mm for men and 7.5 (OD-10.3) mm for women.

2) After intubation, anaesthesia was maintained with oxygen, air and sevoflurane in most of the cases.

3) At the end of surgery patient was extubated and assessed for sore throat in the post-operative ward and further for 48 h.

4) Grading of post-operative sore throat.

Grade	Severity
	Postoperative sore throat
0	No sore throat at any time since the operation
1	Minimal - Patient answered in the affirmative when asked about sore throat
2	Moderate - Patient complained of sore throat on his/her own
3	Severe - Patient is in obvious distress
	Postoperative cough
0	No cough at any time since the operation
1	Minimal
2	Moderate
3	Severe
	Postoperative hoarseness
0	No complaint of hoarseness at any time since the operation
1	Minimal - Minimal change in quality of speech. Patient answers in the affirmative only when enquired about
2	Moderate - Moderate change in quality of speech of which the patient complains on his/her own
3	Severe - Gross change in the quality of voice perceived by

PROFORMA

Name: Surgery:
Age: Duration:
Sex:
No of intubation attempts: Lignocaine jelly applied:
Use of nitrous oxide: Duration of intubation:

Intra cuff pressure monitoring:

After intubation	2 hours after surgery	Before extubation

Post operative sore throat score

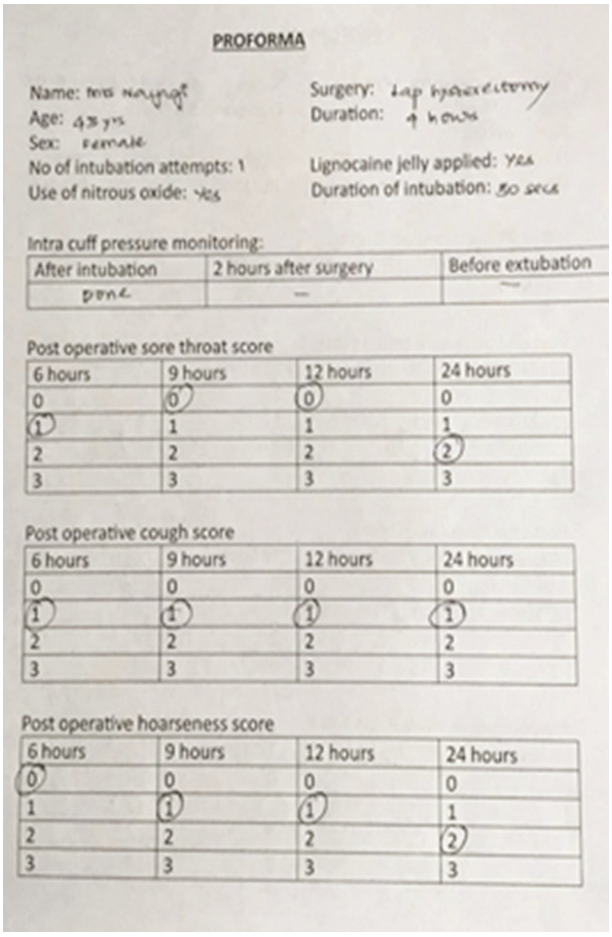
6 hours	9 hours	12 hours	24 hours
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3

Post operative cough score

6 hours	9 hours	12 hours	24 hours
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3

Post operative hoarseness score

6 hours	9 hours	12 hours	24 hours
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3



PROFORMA

Name: [illegible]
Age: 43 yrs
Sex: female
No of intubation attempts: 1
Use of nitrous oxide: yes

Surgery: Lap hysterectomy
Duration: 4 hours
Lignocaine jelly applied: yes
Duration of intubation: 50 secs

Intra cuff pressure monitoring:

After intubation	2 hours after surgery	Before extubation
done	—	—

Post operative sore throat score

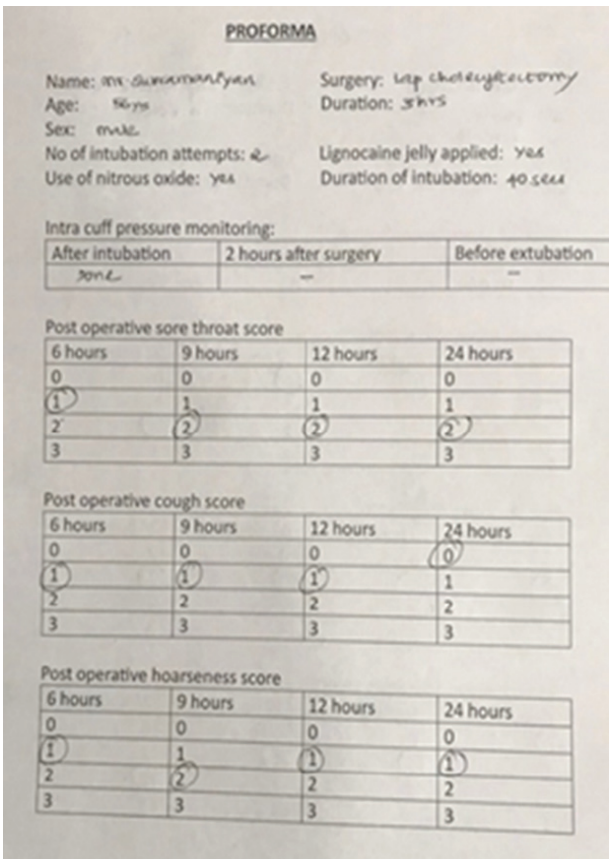
6 hours	9 hours	12 hours	24 hours
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3

Post operative cough score

6 hours	9 hours	12 hours	24 hours
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3

Post operative hoarseness score

6 hours	9 hours	12 hours	24 hours
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3



PROFORMA

Name: [illegible]
Age: 56 yrs
Sex: male
No of intubation attempts: 2
Use of nitrous oxide: yes

Surgery: Lap cholecystectomy
Duration: 3 hrs
Lignocaine jelly applied: yes
Duration of intubation: 40 secs

Intra cuff pressure monitoring:

After intubation	2 hours after surgery	Before extubation
done	—	—

Post operative sore throat score

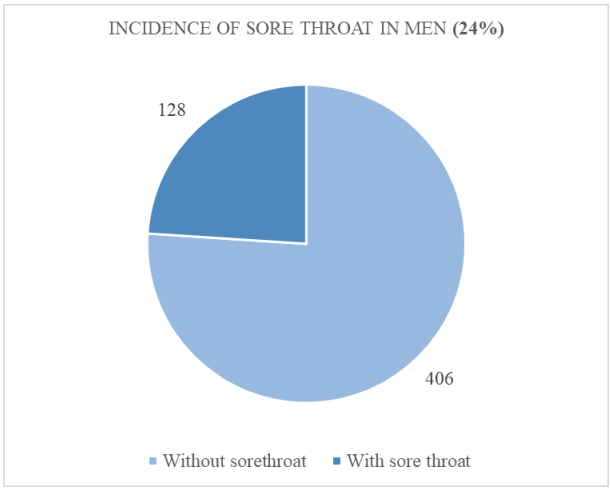
6 hours	9 hours	12 hours	24 hours
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3

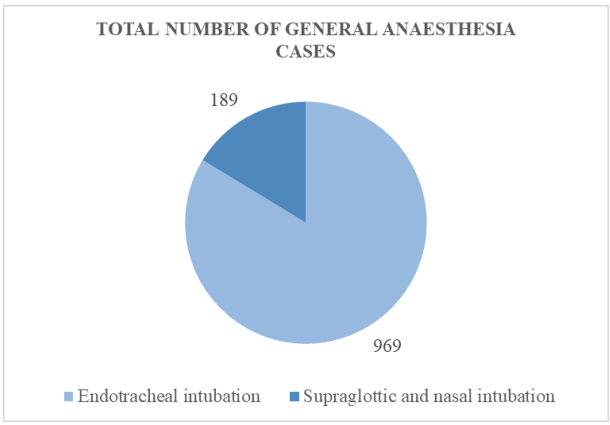
Post operative cough score

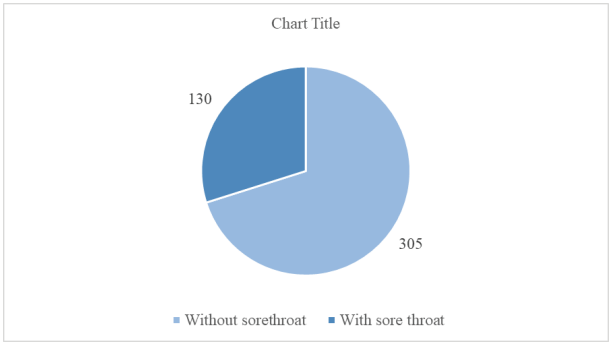
6 hours	9 hours	12 hours	24 hours
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3

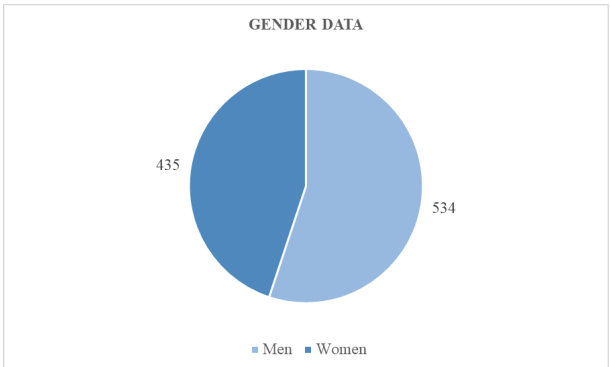
Post operative hoarseness score

6 hours	9 hours	12 hours	24 hours
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3









Findings

• From the data collected in the year 2021.

• Incidence of sore throat: Men-24%, Women-30%.

• Women were found to have more incidence of sore throat than men.

• Almost one-third of the patients had complaints of sore throat in the immediate post-operative period.

Analysis of Journals

Lidocaine for preventing postoperative sore throat

Yuu Tanaka [1], Takeo Nakayama, Mina Nishimori, Yuki Sato, Hitoshi Furuya

Affiliations + expand

PMID: 19588349 DOI: 10.1002/14651858.CD004081.pub2

Full text links | Cite

Update in

Lidocaine for preventing postoperative sore throat.

Tanaka Y, Nakayama T, Nishimori M, Tsujimura Y, Kawaguchi M, Sato Y.

Cochrane Database Syst Rev. 2015 Jul 14;2015(7):CD004081. doi: 10.1002/14651858.CD004081.pub3.

PMID: 26171894 Free PMC article. Review.

Abstract

Background: Sore throat is a common side effect of general anaesthesia and is reported by between 30% and 70% of patients after tracheal intubation. The likelihood of a sore throat varies with the type, diameter, and cuff pressure of the endotracheal tube used. If intubation is essential, it may be helpful to give drugs prophylactically to alleviate postoperative sore throat. Local anaesthetics and steroids have been used for this purpose.

Methods Implemented

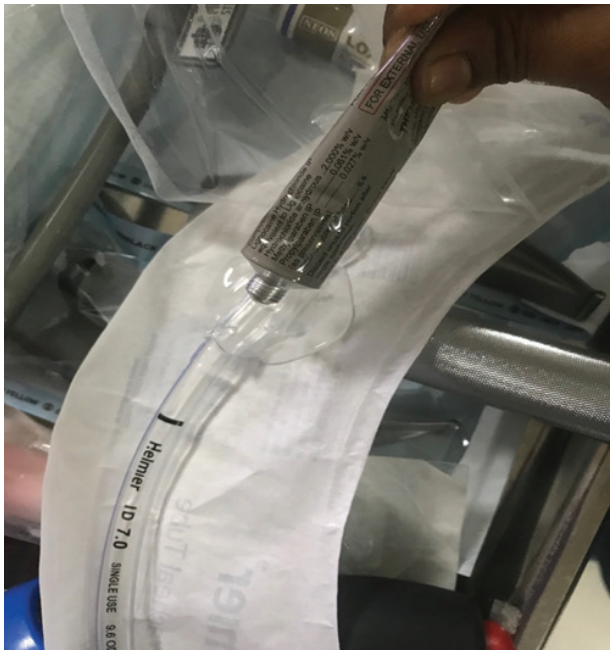
• Minimisation of intubation attempts and minimising airway trauma

• Application of lignocaine jelly over the cuff before intubation can be done to reduce the incidence of sore throat

• In prolonged surgeries, cuff pressure monitoring can be done periodically and the use of nitrous oxide can be minimised as cuff inflation may cause airway edema and increase the incidence of sore throat.

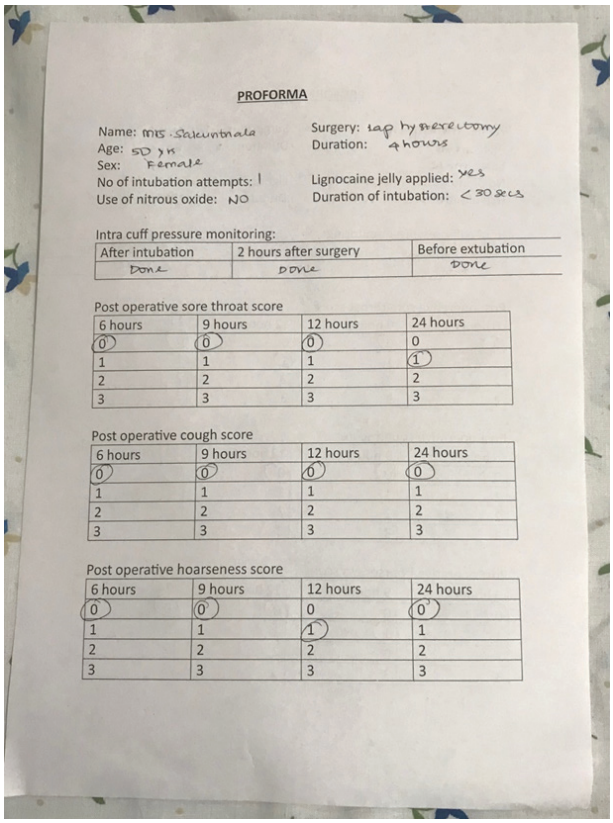
Monitoring cuff pressure

Minimising N2O



Use of lignocaine jelly

Data collected in next 3 months



PROFORMA

Name: mis Sakuntala
Age: 50 yrs
Sex: Female
No of intubation attempts: 1
Use of nitrous oxide: NO

Surgery: tap hysterectomy
Duration: 4 hours
Lignocaine jelly applied: yes
Duration of intubation: < 30 secs

Intra cuff pressure monitoring:

After intubation	2 hours after surgery	Before extubation
Done	Done	Done

Post operative sore throat score

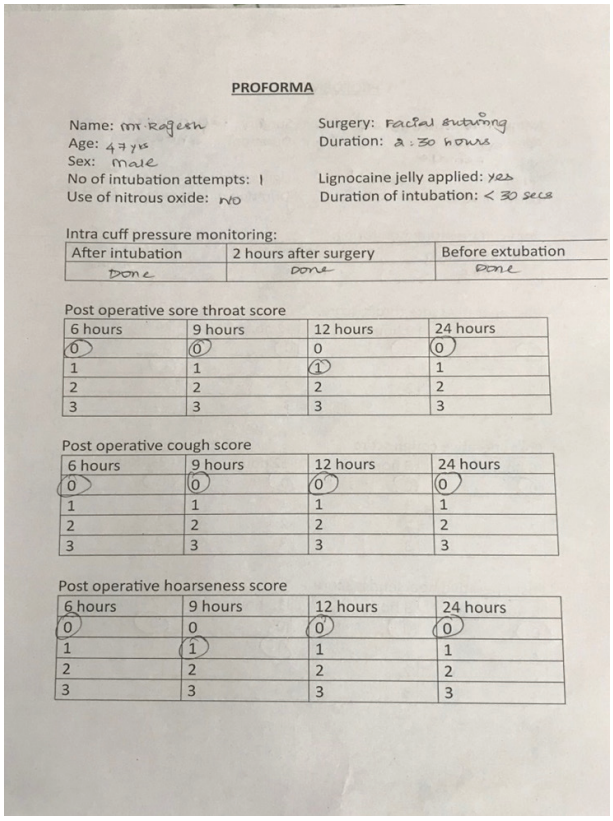
6 hours	9 hours	12 hours	24 hours
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3

Post operative cough score

6 hours	9 hours	12 hours	24 hours
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3

Post operative hoarseness score

6 hours	9 hours	12 hours	24 hours
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3



PROFORMA

Name: mr Rafeen
Age: 47 yrs
Sex: male
No of intubation attempts: 1
Use of nitrous oxide: NO

Surgery: Facial suturing
Duration: 2:30 hours
Lignocaine jelly applied: yes
Duration of intubation: < 30 secs

Intra cuff pressure monitoring:

After intubation	2 hours after surgery	Before extubation
Done	Done	Done

Post operative sore throat score

6 hours	9 hours	12 hours	24 hours
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3

Post operative cough score

6 hours	9 hours	12 hours	24 hours
0	0	0	0
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Post operative hoarseness score

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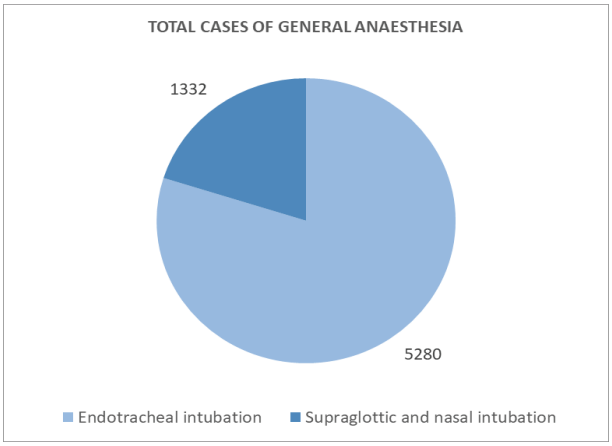

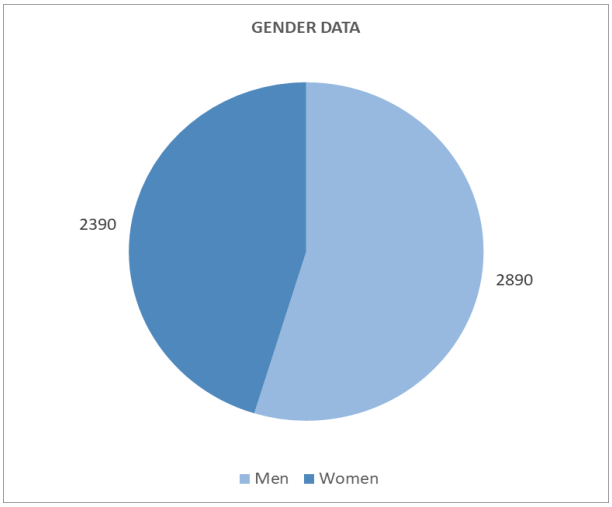

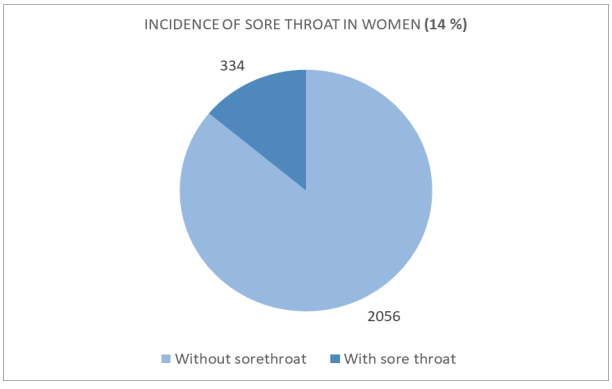

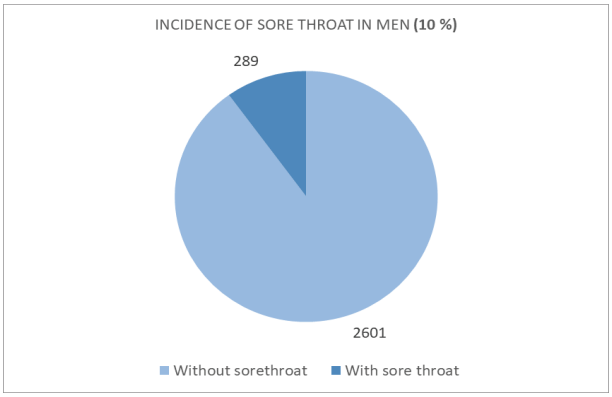

Findings

• The incidence of sore throat in men is 10% (previous 24%).

• The incidence of sore throat in women is 14% (previous 30%).

Methods Implemented

• Minimisation of intubation attempts and minimising airway trauma.

• Application of lignocaine jelly over the cuff before intubation can be done to reduce the incidence of sore throat.

• In prolonged surgeries, cuff pressure monitoring can be done periodically and the use of nitrous oxide can be minimised as cuff inflation may cause airway edema and increase the incidence of sore throat.

Conclusion

• Thus after implementing the above-mentioned measures incidence of post-operative sore throat was minimised to almost half the incidence of the previous year.

• Patient comfort improved after general anaesthesia.

• Intracuff instillation of lignocaine is also another method and it's an ongoing audit.