EUROPEAN JOURNAL OF BIOMEDICAL AND PHARMACEUTICAL SCIENCES
http://www.ejbps.com

ISSN 2349-8870
Coden USA: EJBPBO
Volume: 13
Issue: 11
Year: 2026

INCIDENCE OF POST-OPEARIVE SORE THROAT (POST) & Its CORRELATION TO ENDOTRACHEAL TUBE CUFF PRESSURE AMONG PATIENTS UNDERGOING SURGERY IN GA AT SWAH

Tabish Hussain*[1], Mansoor Siddiqui[2], Martina Boyle[3]

[1]Specialist Anaesthesia and ICU, South West Acute Hospital, Western Health and Social Care Trust, NHS, Northern Ireland, United Kingdom.
[2]Consultant Anaesthesia and ICU, South West Acute Hospital, Western Health and Social Care Trust, NHS, Northern Ireland, United Kingdom.
[3]RN Post Anaesthesia Care Unit, South West Acute Hospital, Western Health and Social Care Trust, NHS, Northern Ireland, United Kingdom.

***Corresponding Author: Tabish Hussain**
Specialist Anaesthesia and ICU, South West Acute Hospital, Western Health and Social Care Trust, NHS, Northern Ireland, United Kingdom. **DOI:** https://doi.org/10.5281/zenodo.23802726

How to cite this Article: Tabish Hussain*[1], Mansoor Siddiqui[2], Martina Boyle[3]. (2026). Incidence of Post-Opearive Sore Throat (Post) & Its Correlation To Endotracheal Tube Cuff Pressure Among Patients Undergoing Surgery In Ga At Swah. European Journal of Biomedical and Pharmaceutical Sciences, 13(11), 153–156.
This work is licensed under Creative Commons Attribution 4.0 International license.

Article Received on 22/09/2026 **Article Revised on 12/10/2026** **Article Published on 01/11/2026**

BACKGROUND
The definition of Post Op Sore Throat, POST can vary, but generally refers to pain or discomfort in the larynx or pharynx after surgery or extubation.

Sore throat is a common postoperative complaint, occurring most often following tracheal intubation. Factors such as tracheal-tube size and cuff design have been shown to be important causative factors. Routine tracheal intubation for elective surgical procedures can result in pathological changes, trauma and nerve damage which may also account for postoperative throat symptoms. After tracheal intubation, the incidence of sore throat varies from 14.4% to 50%. The wide variation in these figures is presumably due to different skills and techniques among anaesthetists and to differences between individual anaesthetists and patients in the definition of sore throat. It is well recognized that the method of questioning is an important determinant of the incidence of sore throat.

AIM/OBJECTIVES
To evaluate the incidence of post-operative sore throat in the immediate post-operative phase (30min), categorize its severity and correlate it with ETT Cuff pressure if any co-incidence found.

OPERATIONAL DEFINITIONS
Immediate Post-Op Phase
The time calculated (Avg 30 min) from arrival to departure of patient from Post-Anaesthesia Care Unit (PACU/Recovery) to its final destination (Either ward or day care). Rescue medications can be given in this phase.

Post-Op Sore Throat (POST)
The definition of POST can vary, but generally refers to pain or discomfort in the larynx or pharynx after surgery or extubation.

PACU: Post Anaesthesia Care Unit

SEVERITY OF POST
Four-Level or Four Point Scale System:
This is a common method, classifying POST as none, mild, moderate, or severe.

Sore throat severity is often assessed on a 0-3 scale, where 0 represents no soreness and 3 represents severe soreness.

Grades	Severity of postoperative sore throat
0	No sore throat
I	Mild sore throat (complains of sore throat only upon inquiry)
II	Moderate sore throat (complains of sore throat only)
III	Severe sore throat (severe pain associated with marked change in voice)

0-I was considered as mild, and II-III as severe.

Setting: South West Acute Hospital, SWAH, Enniskillen.
Study Design: Prospective Data collected from PACU.
Duration: 6 Months after approval of proposal/synopsis.

Inclusion criteria

1. ASA: 1-4
2. Age: Adults, 16 years & above
3. Elective surgery under GA with ETT

Exclusion criteria

1. GA with SGA devices, I gel, Sedation, Regional Anaesthesia/Contraindication to general anaesthesia.
2. Patient with pre-existing sore throat, tonsillitis, pharyngitis, chronic pain syndrome, complex regional pain syndrome or having pre-existing neuropathic pain.
3. Pre-existing Pain in neck, throat or face.

METHODS

After approval from hospital ethical committee, adult Patients (Age >16 years) who underwent elective surgery under General Anaesthesia at SWAH were recruited from SWAH recovery /post- anaesthesia care unit over a period of 6 Months from July 2025 to Dec 2025.

The data was collected from recovery/post anaesthesia care unit and was scrutinized for sore throat in the immediate post-op period (up to 30min). A predefined target of 40 patients were included in the study. The PACU staff in the recovery collected the data directly from the patients. The POST was evaluated clinically after every 5 minutes interval till 30 minutes. The severity of sore throat and associated causes were scrutinized. The data was kept confidential and used only for audit/KPI purpose.

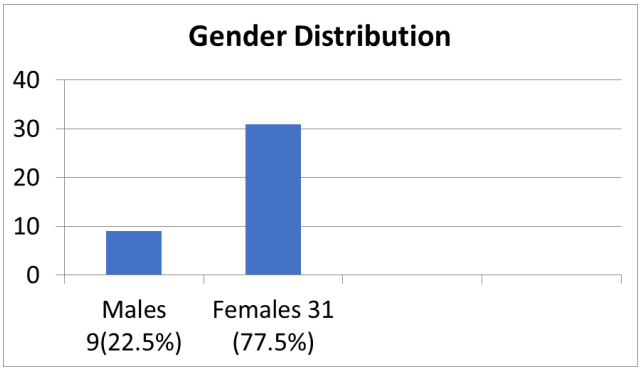
DATA ANALYSIS

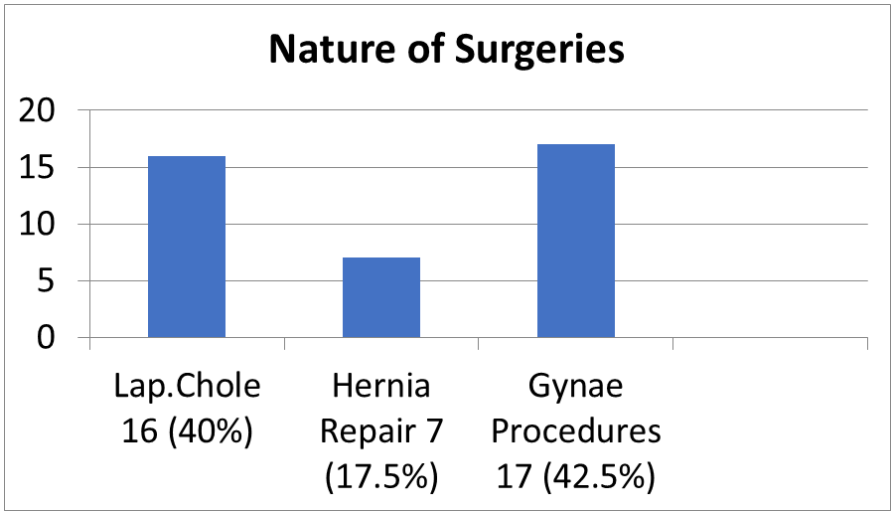
Data was collected on a well-structured predefined Performa and SPSS 15 version was used to analyse it. Categorical variables like gender, nature of surgery and the incidence of POST have been expressed as frequencies (number) and percentages.

Interval after Shifting to PACU	POST. Post Op Sore Throat	Severity of POST	RESCUE ANALGESIC or Medication or Intervention	Response	ETT Cuff Pressure in OR
Baseline					
5 Min					
10 Min					
15 min					
20 Min					
25 Min					
30 Min					

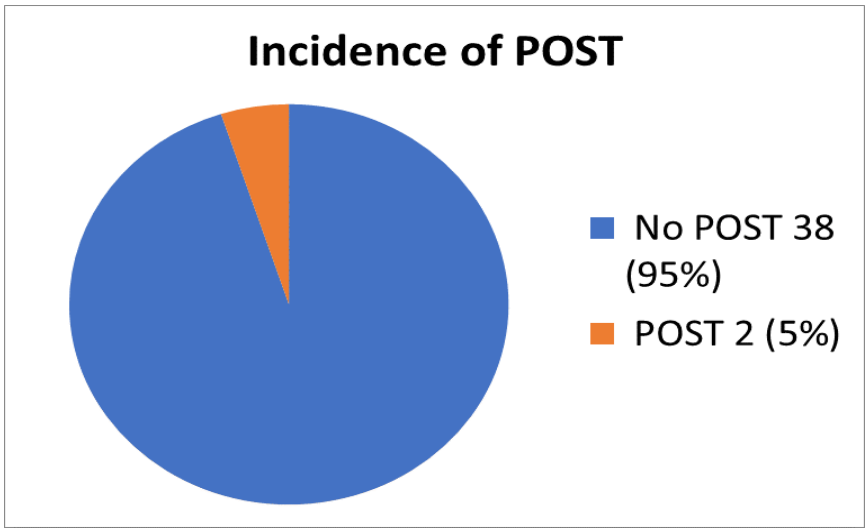
RESULTS

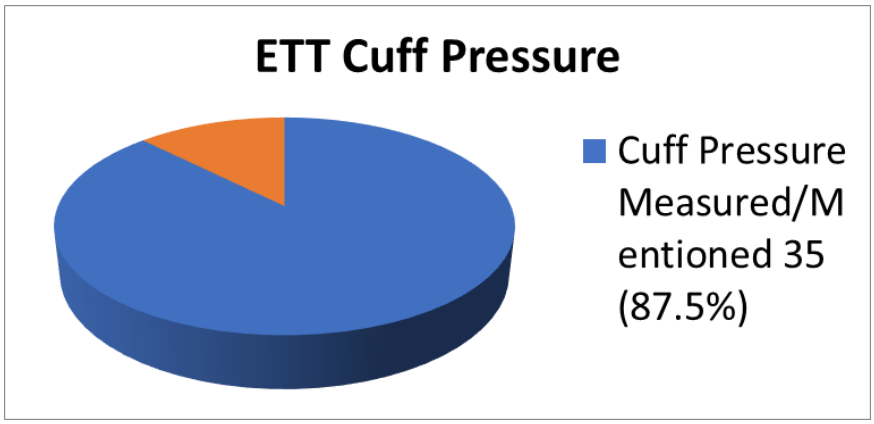
A total of 40 participants were enrolled in the study. 9 (22.5%) were males and 31 (77.5%) were females. The age ranged from 19 years to 78 years. All the study participants were informed and consented before undergoing anaesthesia regarding POST, severity and study design. Most of the surgeries were Gynae related procedures 42.5% (n=17) followed by Lap. Choles 40% (n=16) and Hernioplaties 17.5% (n=7). The cuff pressure ranged from 24 minimum to 30 maximum. The ETT size ranged from 7 to 8.





Only 2 patients (5%) among 40 reported POST in the recovery in the first 10 minutes. Both the patients reported only mild POST (POST Score 1). They were re-assured and the complaint resolved within 10 minutes. No active interventions were required. While collecting data from EMR to document ETT cuff pressure, it was noted that 35 patients (87.5%) had documented cuff pressure readings. Among 5 patients (12.5%), the cuff pressure was either not measured or documented. The patients with POST (5%, N=2) had cuff pressure readings with in normal range (26 & 30 cm H2O).





CONCLUSIONS

The ETT cuff pressure has direct co-relation with POST in most of the causes despite having other causes. The incidence of POST in our hospital setup is very low (5%) which is acceptable in comparison to the international benchmark of 40%. The key learning in our audit was

either non measurement or documentation of ETT cuff pressure among 5 patient (12.5%). Although, all these patients never reported POST, but for accurate documentation and medical records, the cuff pressure should be measured and documented in all the patients undergoing GA with ETT intubations.

Areas of good practice

Low incidence of POST among patients undergoing GA with ETT intubations. (5% in comparison to 40% International benchmark)

Areas where improvement is required

Measure and document the ETT cuff pressure for all the patients undergoing GA with ETT intubations.

RECOMMENDATIONS

Measure and document the ETT cuff pressure for all the patients undergoing GA with ETT intubations.

REFERENCES

1. Boghdadly K., Bailey C., Wiles M. Postoperative sore throat: a systematic review. Anaesthesia, 2016; 71(6): 706–717.
2. Higgins P., Chung F., Mezei G. Postoperative sore throat after ambulatory surgery. Br. J. Anaesth, 2002; 88(4): 582–584.
3. Jiang Y., Chen R., Xu S., Li J., Yu F., Kong L., et al. The impact of prophylactic dexamethasone on postoperative sore throat: an updated systematic review and meta-analysis. J. Pain Res., 2018; 11: 2463–2475.
4. Kuriyama A., Maeda H., Sun R., Aga M. Topical application of corticosteroids to tracheal tubes to prevent postoperative sore throat in adults undergoing tracheal intubation: a systematic review and meta-analysis. Anaesthesia, 2018a; 73(12): 1546–1556.
5. Kuriyama A., Nakanishi M., Kamei J., Sun R., Ninomiya K., Hino M. Topical application of ketamine to prevent postoperative sore throat in adults: a systematic review and meta-analysis. ActaAnaesthesiol. Scand, 2020; 64(5): 579–591.
6. Kusunoki T., Sawai T., Komasawa N., Shimoyama Y., Minami T. Correlation between extraction force during tracheal intubation stylet removal and postoperative sore throat. J. Clin. Anesth, 2016; 33: 37–40.
7. Liu J., Zhang X., Gong W., Li S., Wang F., Fu S., et al. Correlations between controlled endotracheal tube cuff pressure and postprocedural complications: a multicenter study. Anesth. Analgesia, 2010; 111(5): 1133–1137.
8. McHardy F., Chung F. Postoperative sore throat: cause, prevention and treatment. Anaesthesia, 1999; 54(5): 444–453.
9. Mitobe Y., Yamaguchi Y., Baba Y., Yoshioka T., Nakagawa K., Itou T., et al. A literature review of factors related to postoperative sore throat. J. Clin. Med. Res., 2022; 14(2): 88–94. 10.
10. Prekker M. E., Driver B. E., Trent S. A., Resnick-Ault D., Seitz K. P., Russell D. W., et al. Video versus direct laryngoscopy for tracheal intubation of critically ill adults. N. Engl. J. Med., 2023; 389: 418–429. 10.1056/NEJMoa2301601