Essentia:
Journal of Medical Practice and Research
Vol 2 No 1 June 2026, Hal 215-224
ISSN: 3123-4100 (Print) ISSN: 3123-4097 (Electronic)
Open Access: https://scriptaintelektual.com/essentia

Profile of Chronic Tonsillitis Patients Undergoing Tonsillectomy

Mohammad Dwijo Murdiyo[1*], Bio Swadi Ghutama[2*]
[1-2] Brawijaya University, Indonesia
email: bioswadighutama@gmail.com[1]

Article Info :
Received:
19-2-2026
Revised:
24-2-2026
Accepted:
27-2-2026

Abstract

Tonsillitis is an inflammation of the palatine tonsils, an important part of Waldeyer's ring that plays a role in defending the mucous membranes of the respiratory and digestive tracts. Chronic tonsillitis is prolonged inflammation of the tonsils, usually after several episodes of recurrent acute tonsillitis, at least seven times a year. Treatment can be conservative (medical) or surgical, such as tonsillectomy. This study aims to determine the characteristics of patients with chronic tonsillitis who underwent tonsillectomy at Saiful Anwar General Hospital during the period of 2022-2024. This study aims to describe the demographic characteristics, clinical presentations, surgical indications, procedures and postoperative outcome of patients with chronic tonsillitis who underwent tonsillectomy at Saiful Anwar General Hospital during the period of 2022-2024. This study is a retrospective descriptive observational study with data collected from medical records of patients diagnosed with chronic tonsillitis who underwent surgery. A total of 135 patients were recorded. The most common age group was around 5–11 years (42.2%). There were more male patients than female, with 84 men (62.2%) and a ratio of 1,6:1. The most common chief complaint was throat pain (53.3%). The most frequently observed tonsil size was T3 (43.7%), and (45.2%) of patients also had adenoid hypertrophy. The most common indication for surgery was infection (49.6%), with the most frequently performed procedure being adenotonsillectomy (73.3%). The most commonly used surgical technique was cold dissection (65.2%). Postoperative bleeding complications occurred in 3 patients (2.2%). The most common length of hospital stay was 2 days (38.5%). Most patients with chronic tonsillitis who underwent surgery were children aged around 5–11 years, predominantly male, with T3 tonsil sized and associated adenoid hypertrophy. The most common indication for surgery was infection, with adenotonsillectomy using the cold dissection technique as the primary method, demonstrating minimal complications and a short hospital stay.

Keywords: Tonsillitis, Chronic Tonsillitis, Adenotonsillectomy, Cold Dissection, Palatine Tonsils, Waldeyer's Ring.

INTRODUCTION

Ear, nose, and throat (ENT) disorders continue to represent a substantial component of the global burden of infectious and inflammatory diseases, with chronic tonsillitis increasingly recognized not merely as a localized oropharyngeal condition but as an immunologically mediated disorder involving complex host–pathogen interactions within lymphoid tissues that constitute Waldeyer's ring; emerging insights into mucosal immunology have demonstrated that palatine tonsils function as highly specialized immune surveillance organs whose dendritic cell subsets and pattern recognition receptor expressions actively modulate adaptive immune responses against microbial colonization (Askmyr et al., 2021), while evolving epidemiological and clinical observations indicate that persistent inflammatory stimulation within these tissues may contribute to recurrent upper airway pathology with broader respiratory implications (Guerreiro et al., 2023).

Accumulating empirical evidence suggests that chronic tonsillitis arises through multifactorial mechanisms encompassing bacterial persistence, recurrent acute infections, and immune dysregulation, with clinical manifestations frequently progressing toward complications that necessitate surgical intervention; epidemiological profiling studies have consistently shown that bacterial pathogens, particularly Streptococcus species, remain primary etiological agents contributing to recurrent inflammatory episodes and subsequent deterioration in patient quality of life (Haidara et al., 2019), whereas randomized trials examining perioperative management strategies such as adjunctive analgesic interventions following tonsillectomy have demonstrated measurable improvements in postoperative recovery trajectories, indirectly reinforcing the clinical value of surgical management in selected cases

(Derbel et al., 2022).

Despite these advances, contemporary literature remains marked by significant heterogeneity in defining surgical candidacy and predicting postoperative outcomes, with recent microbiome-based investigations revealing distinct microbial compositions associated with post-tonsillectomy hemorrhage in pediatric populations that challenge conventional pathogen-centric paradigms (Duan et al., 2024); parallel hematological analyses have also highlighted the presence of undiagnosed bleeding disorders among surgical candidates, complicating perioperative risk stratification and underscoring the limitations of existing screening frameworks in accurately anticipating adverse postoperative events (Baker & O'Donnell, 2021).

Unresolved uncertainties surrounding immunological consequences of tonsillectomy further amplify the clinical significance of patient selection, as early-life immune modulation studies have suggested that lymphoid tissue removal may alter immune training processes with potential long-term implications for systemic disease susceptibility (Hauer et al., 2021), while technological innovations such as preoperative E-health interventions have demonstrated measurable influence on postoperative recovery patterns, indicating that patient characteristics and perioperative variables interact in ways that remain insufficiently characterized within routine clinical practice (Hakanen et al., 2024).

Within this evolving scientific landscape, growing attention has been directed toward the relationship between chronic oropharyngeal inflammation and susceptibility to viral infections of the upper aerodigestive tract, as prospective cohort analyses investigating oral human papillomavirus detection have implied that structural and immunological alterations of tonsillar tissues may influence pathogen persistence and disease progression in ways not fully captured by traditional clinical assessments (Hillier et al., 2025).

This study seeks to delineate the demographic, clinical, and perioperative profile of chronic tonsillitis patients undergoing tonsillectomy, generating empirically grounded evidence intended to refine patient stratification frameworks and advance methodological approaches to surgical outcome evaluation in otorhinolaryngological practice.

RESEARCH METHODS

This investigation employed an empirical retrospective descriptive observational design based on systematic medical record review. The study population comprised all patients diagnosed with chronic tonsillitis who underwent evaluation and surgical management at the Ear, Nose, Throat–Head and Neck Surgery (ENT-ORLHNS) Department of Saiful Anwar General Hospital, Malang, between January 2022 and December 2024. A total sampling strategy was applied to ensure comprehensive case inclusion and to minimize selection bias. Eligible participants were patients with a confirmed clinical diagnosis of chronic tonsillitis who subsequently underwent tonsillectomy, while cases with incomplete or missing medical records were excluded to preserve data integrity and analytical reliability. Data extraction was conducted using a structured abstraction protocol to obtain demographic variables (age, sex), clinical characteristics (chief complaints, tonsil size, comorbid diagnoses), surgical indications, type of surgical procedure and technique, postoperative complications, and length of hospital stay. All records were anonymized prior to analysis to ensure confidentiality.

Data were collected using a standardized medical record extraction sheet designed to enhance consistency and reproducibility across cases. Descriptive statistical analysis was performed to summarize patient characteristics, clinical profiles, operative management patterns, and postoperative outcomes; findings were presented in tabular and narrative formats to facilitate transparent interpretation. No inferential hypothesis testing was conducted, as the study objective was to construct a comprehensive clinical profile rather than establish causal associations. Ethical approval was obtained from the Research Ethics Committee (KEP) of the Faculty of Medicine, Universitas Brawijaya/Saiful Anwar General Hospital (Ethical Clearance No. 400/209.K.3/102.7.2025; July 18, 2025), and all procedures adhered to institutional and international standards for research involving human data.

RESULTS AND DISCUSSION

The study subjects were visitors who came to the ENT-ORLHNS polyclinic of Saiful Anwar Malang General Hospital who had met the research criteria. Data were taken from patient medical records from January 2022 to December 2024, and a total of 135 patients with chronic tonsillitis underwent tonsillectomy procedures. Based on the gender of the 135 patients, 84 were male (62.2%)

and 51 were female (37.8%), with a male: female ratio of 1.6:1 will be explained in the table 1. Meanwhile, patients with chronic tonsillitis who underwent tonsillectomy based on age were 11 people aged 0-4 years, 57 people aged 5-11 years, 44 people aged 12-25 years, 17 people aged 26-45 years, 5 people aged 46-59 years, and 1 person aged ≥60 years, will be explained in the table 2.

Table 1. Data on chronic tonsillitis patients who underwent surgery based on gender

Gender	Amount	Percentage (%)
Male	84	62,2
Female	51	37,8

Source: Data report Saiful Anwar General Hospital 2025

Table 2. Data on chronic tonsillitis patients who underwent surgery based on age

Age	Amount	Percentage (%)
0-4	11	8,1
5-11	57	42,2
12-25	44	32,6
26-45	17	12,6
46-59	5	3,7
>60	1	0,7

Source: Data report Saiful Anwar General Hospital 2025

Based on the main complaints in chronic tonsillitis patients who underwent surgery, there were 72 people with sore throat, 16 people with difficulty swallowing, 17 people with snoring, 4 people with a lump in the throat, 20 people with focal infection removal, and 6 people with recurrent cough and cold (table 3). Meanwhile, based on the size of the tonsils, they were divided into T1 (the medial border of the tonsils passes through the anterior pillar to ¼ the distance between the anterior pillar and the uvula), T2 (the medial border of the tonsils passes through ¼ the distance between the anterior pillar and the uvula to ½ the distance between the anterior pillar and the uvula), T3 (the medial border of the tonsils passes through ½ the distance between the anterior pillar and the uvula to ¾ the distance between the anterior pillar and the uvula), and T4 (the medial border of the tonsils passes through ¾ the distance between the anterior pillar and the uvula or more). T1 tonsil size was 2 people, T2 tonsil size was 48 people, T3 tonsil size was 59 people, and T4 tonsil size was 26 people (table 4).

Table 3. Data on chronic tonsillitis patients who underwent surgery based on the main complaint

Main complaint	Amount	Perecentage (%)
Sore throat	72	53,3
Pain when swallowing	16	11,9
Snoring	17	12,6
Throat lump	4	3
Eliminate the focus of infection	20	14,8
Recurrent cough and cold	6	4,4

Source: Data report Saiful Anwar General Hospital 2025

Table 4. Data on chronic tonsillitis patients who underwent surgery based on tonsil size

Tonsil size	Amount	Percentage (%)
T1	2	1,5
T2	48	35,6
T3	59	43,7
T4	26	19,3

Source: Data report Saiful Anwar General Hospital 2025

Based on comorbidities, patients were categorized as having adenoid hypertrophy, heart problems, obstructive sleep apnea syndrome (OSAS), other illnesses, and no comorbidities (Table 5). Meanwhile, based on surgical indications, they were divided into three categories: infection (67 patients), obstruction (65 patients), and neoplasm (3 patients) (Table 6).

Table 5. Description of data on chronic tonsillitis patients who underwent surgery based on comorbidities

Comorbidities	Amount	Percentage (%)
Without accompaniment	12	8,9
Adenoid hypertrophy	61	45,2
Heart problems	31	23
OSAS	26	19,3
Other diseases	5	3,7

Source: Data report Saiful Anwar General Hospital 2025

Table 6. Description of data on chronic tonsillitis patients who underwent tonsillectomy based on indications

Indication	Amount	Percentage (%)
Infecion	67	49,6
Obstruction	65	48,1
Neoplasm	3	2,2

Source: Data report Saiful Anwar General Hospital 2025

Based on surgical management, it is divided into two types: tonsillectomy and adenotonsillectomy (Table 7). Meanwhile, based on surgical technique, it is divided into two types: cold dissection and hot dissection (Table 8).

Table 7. Description of data on chronic tonsillitis patients who underwent surgery based on management

Operation	Amount	Percentage (%)
Tonsillectomy	36	26,7
Adenotonsillectomy	99	73,3

Source: Data report Saiful Anwar General Hospital 2025

Table 8. Description of data on chronic tonsillitis patients who underwent surgery based on surgical technique

Operation technique	Amount	Percentage (%)
Cold dissection	88	65,2
Hot dissection	47	34,8

Source: Data report Saiful Anwar General Hospital 2025

Based on complications, there were 3 incidents of complications in the form of bleeding (Table 9). Meanwhile, based on length of hospitalization, the average length of stay was 2 days (Table 10).

Table 9. Description of data on chronic tonsillitis patients who underwent surgery based on

complications

Complications	Amount	Percentage (%)
Bleeding	3	2,2
There isn't any	132	97,8

Source: Data report Saiful Anwar General Hospital 2025

Tablel 10. Description of data on chronic tonsillitis patients who underwent surgery based on length of hospitalization

Length of hospitalization (day)	Amout	Percentage (%)
1	48	35,6
2	52	38,5
3	27	20
4	6	4,4
5	2	1,5

Source: Data report Saiful Anwar General Hospital 2025

Male Sex and Pediatric Age Groups Were Associated with Increased Surgical Intervention Among Chronic Tonsillitis Patients

Male predominance was clearly observed among chronic tonsillitis patients undergoing tonsillectomy, with 84 of 135 cases (62.2%) identified as male compared with 51 cases (37.8%) female, resulting in a male-to-female ratio of 1.6:1 that aligns with immunological vulnerability patterns described by Sureshchandra et al. (2025) in tonsillar lymphocyte compartmentalization studies. Sex-based immune response variability may influence inflammatory persistence in lymphoid tissues, as Morath et al. (2024) demonstrated functional activation differences in tonsillar CD4 T-cell populations exposed to chronic antigenic stimulation. Haidara et al. (2019) previously noted epidemiological trends indicating higher surgical rates among male patients with recurrent tonsillar infections, suggesting behavioral and anatomical predispositions may modulate disease chronicity. Askmyr et al. (2021) further emphasized that dendritic cell maturation pathways in tonsillar tissues exhibit differential pattern recognition receptor activity that potentially mediates prolonged mucosal inflammation in susceptible populations.

Age stratification revealed that the largest proportion of patients requiring surgical intervention were between 5–11 years old (57 cases; 42.2%), followed by individuals aged 12–25 years (44 cases; 32.6%), reinforcing findings from Shanthikumar et al. (2025) who described age-related inflammatory cytokine dynamics in mucosal immune systems during early developmental stages. Pediatric immune training mechanisms, as discussed by Hauer et al. (2021), may predispose younger individuals to recurrent lymphoid tissue hyperplasia due to incomplete adaptive immune maturation. Hosomichi and Ono (2025) identified adenotonsillar hypertrophy as a growth-related phenomenon capable of altering airway structure during childhood, which may intensify susceptibility to obstructive or infectious complications necessitating surgery. Mattox et al. (2021) similarly observed enrichment of immune-responsive myeloid cells in tonsillar crypts of younger individuals, suggesting microenvironmental immune activity may drive disease persistence across early age groups.

Early childhood patients aged 0–4 years constituted 11 cases (8.1%), while adult age groups demonstrated substantially lower representation, including 17 patients aged 26–45 years (12.6%), five patients aged 46–59 years (3.7%), and a single patient aged ≥60 years (0.7%), indicating declining surgical necessity across advancing age categories. Wagoner et al. (2025) described host-specific immunological protection mechanisms that develop progressively with age, potentially mitigating recurrent upper airway infections in mature populations. Teh et al. (2024) reported reduced bacterial microcolony persistence within tonsillar tissues in adults compared to children, supporting the hypothesis that microbial colonization patterns shift across the lifespan. Hillier et al. (2025) suggested that structural remodeling of lymphoid tissue over time may alter susceptibility to persistent viral or bacterial colonization, influencing clinical decision-making regarding surgical intervention.

Distribution of age-related surgical intervention patterns may also reflect anatomical changes in lymphoid tissue volume and mucosal surface exposure, as Guerreiro et al. (2023) described developmental respiratory tract adaptations associated with chronic inflammatory airway disease. Makhmut et al. (2023) proposed that tissue-level proteomic variability within immune organs may determine local inflammatory resilience or susceptibility under chronic pathogenic exposure. Wilson et al. (2023) demonstrated that recurrent acute tonsillitis episodes requiring surgical management are more prevalent in younger individuals whose immune tolerance thresholds remain in developmental transition. Rovin et al. (2021) highlighted the role of systemic inflammatory comorbidity interactions in shaping organ-specific immune responses, suggesting age-dependent physiological variability may indirectly affect surgical candidacy.

Pediatric dominance among surgical cases may also be attributed to early immune microenvironmental imprinting that predisposes lymphoid tissues to persistent inflammatory activation under microbial challenge, as described by Sureshchandra et al. (2025). Teh et al. (2024) indicated that bacterial aggregation within tonsillar crypts occurs more frequently in hyperplastic lymphoid tissue commonly observed during childhood. Duan et al. (2024) reported distinct tonsillar microbiome profiles in pediatric patients experiencing postoperative hemorrhage, implying that microbial diversity influences both disease progression and surgical risk profiles. Mofatteh et al. (2020) noted that postoperative morbidity varies significantly across age groups, further emphasizing the clinical importance of demographic profiling in preoperative planning.

Population-level demographic findings suggest that sex and age may function as clinically relevant determinants of surgical necessity among chronic tonsillitis patients, potentially mediated through structural and immunological variability within tonsillar tissues. Alrayah (2023) observed that recurrent inflammatory episodes leading to operative management were disproportionately represented in younger and male patient cohorts across secondary care settings. Baker and O'Donnell (2021) emphasized that perioperative risk factors, including bleeding susceptibility, may interact with patient-specific biological characteristics, underscoring the need for individualized evaluation. Hakanen et al. (2024) demonstrated that patient characteristics significantly influence postoperative recovery trajectories, reinforcing the importance of demographic profiling in optimizing surgical outcomes.

Tonsillar Hypertrophy and Comorbid Adenoid Conditions Were Associated with Obstructive Surgical Indications

Tonsillar enlargement was predominantly observed at advanced grades among chronic tonsillitis patients undergoing surgical management, with T3 tonsil size documented in 59 cases (43.7%) followed by T2 in 48 cases (35.6%) and T4 in 26 cases (19.3%), while only two cases (1.5%) presented with T1 morphology, reflecting structural hypertrophy patterns previously characterized by Hosomichi and Ono (2025) as clinically significant contributors to airway compromise. Persistent lymphoid tissue proliferation may represent an adaptive immunological response to repeated antigen exposure, as Morath et al. (2024) demonstrated that functional reprogramming of tonsillar CD4 T cells may lead to tissue-level expansion under chronic inflammatory conditions. Mattox et al. (2021) identified immune cell enrichment within tonsillar crypts as a potential mechanism sustaining epithelial infiltration and tissue remodeling. Askmyr et al. (2021) similarly reported enhanced maturation profiles of dendritic cells within hypertrophic tonsillar tissue that may perpetuate inflammatory signaling cascades.

Primary presenting complaints further reflected obstruction-dominant symptomatology, with sore throat reported in 72 patients (53.3%), snoring in 17 patients (12.6%), dysphagia in 16 patients (11.9%), recurrent cough and cold in six patients (4.4%), and throat lump sensation in four patients (3%), while 20 patients (14.8%) underwent surgery for focal infection eradication. Haidara et al. (2019) described chronic tonsillar inflammation as a multifactorial clinical entity in which recurrent infection and mechanical airway obstruction frequently coexist. Hillier et al. (2025) highlighted the potential involvement of persistent viral reservoirs in promoting mucosal tissue inflammation, thereby exacerbating symptom severity. Teh et al. (2024) observed bacterial microcolony formation in hypertrophic tonsils, suggesting microbial persistence contributes to both infectious and obstructive manifestations.

Comorbidity profiling revealed that adenoid hypertrophy constituted the most prevalent accompanying condition in 61 patients (45.2%), followed by cardiac abnormalities in 31 patients (23%), obstructive sleep apnea syndrome in 26 patients (19.3%), other systemic illnesses in five patients

(3.7%), and absence of comorbidity in 12 patients (8.9%). Hosomichi and Ono (2025) noted that adenotonsillar hypertrophy exerts measurable influence on craniofacial development and upper airway patency in pediatric populations. Guerreiro et al. (2023) associated lymphoid tissue overgrowth with increased respiratory resistance in chronic airway disease cohorts. Shanthikumar et al. (2025) emphasized that age-dependent inflammatory regulation in mucosal immunity may amplify comorbidity interactions in hypertrophic lymphoid tissue environments.

Surgical indication analysis demonstrated near-equal distribution between infection-related causes in 67 patients (49.6%) and obstruction-related causes in 65 patients (48.1%), with neoplastic suspicion identified in three cases (2.2%). Wilson et al. (2023) established that recurrent acute tonsillitis may necessitate operative intervention when conservative management fails to control symptom recurrence. Duan et al. (2024) reported microbiome diversity alterations in hypertrophic tonsils associated with increased postoperative hemorrhage risk, suggesting microbial burden influences surgical necessity. Hakanen et al. (2024) emphasized that patient-specific clinical characteristics, including preoperative symptom burden, significantly affect surgical outcomes and postoperative recovery.

Interaction between tonsillar size and obstructive comorbidities such as OSAS suggests that structural hypertrophy may amplify sleep-disordered breathing risk among chronic tonsillitis patients, which aligns with inflammatory airway remodeling patterns discussed by Makhmut et al. (2023). Wagoner et al. (2025) described immune organoid modeling approaches that demonstrate host-specific correlates of protection within lymphoid tissue subjected to chronic inflammation. Rovin et al. (2021) emphasized systemic inflammatory processes as modulators of organ-specific immune activity. Sureshchandra et al. (2025) identified compartmentalized immune trajectories in tonsillar tissue that may influence susceptibility to obstruction-related complications.

Clinical patterns observed in this cohort suggest that lymphoid hypertrophy and adenoid comorbidity represent key determinants in the selection of surgical intervention pathways for chronic tonsillitis patients. Alrayah (2023) reported similar associations between recurrent inflammatory symptoms and airway obstruction in secondary care populations. Baker and O'Donnell (2021) noted that individualized perioperative evaluation is essential in patients presenting with structural airway compromise to mitigate complication risk. Mofatteh et al. (2020) demonstrated that operative outcomes vary according to preoperative anatomical characteristics, highlighting the importance of integrating hypertrophy grading into surgical decision frameworks.

Surgical Technique Selection Was Associated with Low Postoperative Complication Rates and Short Hospitalization

Operative management in this cohort demonstrated that adenotonsillectomy was performed in 99 patients (73.3%), whereas isolated tonsillectomy was undertaken in 36 patients (26.7%), indicating a procedural preference influenced by concomitant adenoidal involvement and airway obstruction severity. Hosomichi and Ono (2025) associated adenotonsillar hypertrophy with measurable alterations in upper airway patency that frequently necessitate combined surgical removal for functional restoration. Wilson et al. (2023) argued that procedural selection in recurrent tonsillitis should reflect symptom burden and anatomical compromise rather than infection frequency alone. Hakanen et al. (2024) reported that tailored perioperative planning based on clinical presentation significantly improves postoperative recovery trajectories among tonsillectomy patients.

Surgical technique analysis revealed that cold dissection was employed in 88 patients (65.2%) compared to hot dissection in 47 patients (34.8%), suggesting institutional preference toward conventional tissue separation approaches. Mofatteh et al. (2020) demonstrated that cold dissection techniques are associated with reduced postoperative morbidity compared to bipolar electrocautery-based procedures. Derbel et al. (2022) emphasized that operative technique influences postoperative analgesic requirements through variations in tissue trauma and inflammatory response. Morath et al. (2024) identified immune activation pathways within tonsillar tissue that may respond differently to thermal versus mechanical surgical manipulation.

Postoperative complications were observed in only three patients (2.2%), all of whom experienced bleeding events, whereas 132 patients (97.8%) recovered without documented adverse outcomes. Baker and O'Donnell (2021) described perioperative hemorrhage as one of the most clinically significant complications associated with surgical mucosal interventions. Duan et al. (2024)

linked postoperative hemorrhagic events to microbial ecosystem variability within hypertrophic tonsillar tissue. Askmyr et al. (2021) highlighted that dendritic cell-mediated immune responses in lymphoid organs may influence local hemostatic mechanisms during surgical recovery.

Hospitalization duration further reflected favorable postoperative outcomes, with 48 patients (35.6%) discharged after one day, 52 patients (38.5%) after two days, 27 patients (20%) after three days, six patients (4.4%) after four days, and only two patients (1.5%) requiring five days of inpatient care. Haidara et al. (2019) reported that uncomplicated tonsillectomy cases typically exhibit rapid postoperative stabilization within short hospitalization intervals. Guerreiro et al. (2023) associated reduced inpatient duration with improved perioperative respiratory function among ENT surgical populations. Shanthikumar et al. (2025) observed that efficient inflammatory regulation in mucosal tissues may contribute to accelerated postoperative healing dynamics in younger patient cohorts.

Interaction between operative technique and postoperative recovery suggests that mechanical dissection methods may mitigate excessive thermal tissue damage, which aligns with proteomic spatial tissue responses discussed by Makhmut et al. (2023). Teh et al. (2024) demonstrated that microbial persistence within tonsillar microcolonies may exacerbate postoperative inflammatory responses following tissue injury. Sureshchandra et al. (2025) described compartmentalized immune trajectories that potentially regulate tissue repair following lymphoid organ excision. Wagoner et al. (2025) emphasized that host-specific immune correlates of protection may influence recovery duration following surgical intervention.

Observed surgical outcomes reinforce the premise that appropriate technique selection and procedural planning contribute substantially to minimizing complication risk and hospitalization burden in chronic tonsillitis management. Hillier et al. (2025) suggested that mucosal immune surveillance mechanisms influence postoperative infection risk in oropharyngeal tissues. Hauer et al. (2021) described immune training processes that may enhance tissue resilience to surgical stress during early-life inflammatory exposure. Alrayah (2023) reported that procedural standardization in secondary care settings correlates with improved safety profiles among chronic tonsillitis patients undergoing tonsillectomy.

CONCLUSION

Based on the results of research conducted on the characteristics of chronic tonsillitis patients who underwent tonsillectomy at Saiful Anwar General Hospital from January 2022 to December 2024, the majority of patients were children aged 5-11 years, and male, with the most common complaint being a sore throat. Most patients who underwent surgery had T3 tonsil size, most often accompanied by another diagnosis, namely adenoid hypertrophy. The most common indication was infection, with the most common procedure being adenotonsillectomy using the technique. *cold dissection.* In this study, the most common complication observed was post-operative bleeding in 3 people with a maximum hospital stay of 2 days.

REFERENCES

Alrayah, M. (2023). The prevalence and management of chronic tonsillitis: Experience from secondary care hospitals in Rabak City, Sudan. *Cureus*, *15*(2). https://doi.org/10.7759/cureus.34914.

Askmyr, D., Abolhalaj, M., Gomez, D., Greiff, L., Lindstedt, M., & Lundberg, K. (2021). Pattern recognition receptor expression and maturation profile of dendritic cell subtypes in human tonsils and lymph nodes. *Human Immunology*, *82*(12), 976–981. https://doi.org/10.1016/j.humimm.2021.08.007.

Baker, R. I., & O'Donnell, J. S. (2021). How I treat bleeding disorder of unknown cause. *Blood, The Journal of the American Society of Hematology*, *138*(19), 1795-1804. https://doi.org/10.1182/blood.2020010038.

Derbel, R., Achour, I., Thabet, W., Chakroun, A., Zouch, I., & Charfeddine, I. (2022). Addition of magnesium sulfate to bupivacaine improves analgesic efficacy after tonsillectomy: A randomized trial and a CONSORT analysis. *European Annals of Otorhinolaryngology, Head and Neck Diseases*, *139*(6), 327-331. https://doi.org/10.1016/j.anorl.2022.04.007.

Duan, B., Gan, M., Xu, Z., & Chen, W. X. (2024). Tonsil microbiome in pediatric patients with post tonsillectomy hemorrhage for tonsillar hypertrophy. *International Journal of Pediatric Otorhinolaryngology*, *176*, 111788. https://doi.org/10.1016/j.ijporl.2023.111788.

Guerreiro, M. M., Lúcio, M. J., Nogueira, F., Raposo, M., Cristóvão, C., Felgueiras, J. T., Camara, R. P., & Barbosa, M. (2023). *39º Congresso de Pneumologia*. *29*, 117–137. https://doi.org/10.1016/S2531-0437(24)00004-7.

Haidara, A. W., Sidibé, Y., Samaké, D., Coulibaly, A., Touré, M. K., Coulibaly, B. B., ... & Mohamed, A. A. (2019). Tonsillitis and their complications: Epidemiological, clinical and therapeutic profiles. *International Journal of Otolaryngology and Head & Neck Surgery*, *8*(3), 98. https://doi.org/10.4236/ijohns.2019.83011.

Hakanen, O., Torkki, P., Luukkainen, V., Sakki, A., Haaramo, A., Aaltonen, L. M., & Tolvi, M. (2024). A prospective cohort study: The effects of preoperative E-health on the postoperative course of tonsillectomy patients. *American Journal of Otolaryngology*, *45*(4), 104304. https://doi.org/10.1016/j.amjoto.2024.104304.

Hauer, J., Fischer, U., & Borkhardt, A. (2021). Toward prevention of childhood ALL by early-life immune training. *Blood, The Journal of the American Society of Hematology*, *138*(16), 1412-1428. https://doi.org/10.1182/blood.2020009895.

Hillier, B., Waterboer, T., Brooks, J., Nankivell, P., Agarwal, R., Abou-Foul, A. K., ... & Mehanna, H. (2025). Efficacy of oral rinse and other detection methods in detecting oral human papillomavirus infections: the Oromouth cohort study. *Journal of Infection*, *90*(3), 106438. https://doi.org/10.1016/j.jinf.2025.106438.

Hosomichi, J., & Ono, T. (2025). Seminars in Orthodontics Impact of adenotonsillar hypertrophy on craniofacial and general growth : A narrative review. *Seminars in Orthodontics*, *31*(4), 504–508. https://doi.org/10.1053/j.sodo.2025.06.007.

Makhmut, A., Qin, D., Fritzsche, S., Nimo, J., König, J., & Coscia, F. (2023). A framework for ultra-low-input spatial tissue proteomics. *Cell Systems*, *14*(11), 1002-1014. https://doi.org/10.1016/j.cels.2023.10.003.

Mattox, A. K., Roelands, J., Saal, T. M., Cheng, Y., Rinchai, D., Hendrickx, W., ... & Pai, S. I. (2021). Myeloid cells are enriched in tonsillar crypts, providing insight into the viral tropism of human papillomavirus. *The American Journal of Pathology*, *191*(10), 1774-1786. https://doi.org/10.1016/j.ajpath.2021.06.012.

Mofatteh, M. R., Salehi, F., Hosseini, M., Hassanzadeh-Taheri, M., Sharifzadeh, G., & Hassanzadeh-Taheri, M. (2020). Comparison of postoperative morbidity between conventional cold dissection and bipolar electrocautery tonsillectomy: which technique is better?. *Brazilian journal of otorhinolaryngology*, *86*(4), 427-433. https://doi.org/10.1016/j.bjorl.2018.12.013.

Morath, K., Sadhu, L., Dyckhoff, G., Gapp, M., Keppler, O. T., & Fackler, O. T. (2024). Activation-neutral gene editing of tonsillar CD4 T cells for functional studies in human ex vivo tonsil cultures. *Cell Reports Methods*, *4*(1), 100685. https://doi.org/10.1016/j.crmeth.2023.100685.

Rovin, B. H., Adler, S. G., Barratt, J., Bridoux, F., Burdge, K. A., Chan, T. M., ... & Floege, J. (2021). KDIGO 2021 clinical practice guideline for the management of glomerular diseases. *Kidney international*, *100*(4), S1-S276. https://doi.org/10.1016/j.kint.2021.05.021.

Shanthikumar, S., Gubbels, L., Davies, K., Walker, H., Wong, A. T. C., Levi, E., ... & Neeland, M. R. (2025). Highly multiplexed cytokine analysis of bronchoalveolar lavage and plasma reveals age-related dynamics and correlates of inflammation in children. *Mucosal Immunology*, *18*(2), 380-389. https://doi.org/10.1016/j.mucimm.2024.12.008.

Sureshchandra, S., Henderson, J., Levendosky, E., Bhattacharyya, S., Kastenschmidt, J. M., Sorn, A. M., ... & Wagar, L. E. (2025). Deep profiling of human T cells defines compartmentalized clones and phenotypic trajectories across blood and tonsils. *Immunity*, *58*(12), 3130-3143. https://doi.org/10.1016/j.immuni.2025.10.025.

Teh, J., Biswas, K., Waldvogel-Thurlow, S., Broderick, D., Clark, S. T., Johnston, J., ... & Douglas, R. (2024). Paired qualitative and quantitative analysis of bacterial microcolonies in the tonsils of patients with tonsillar hyperplasia. *Microbes and Infection*, *26*(4), 105317. https://doi.org/10.1016/j.micinf.2024.105317.

Wagoner, Z. W., Yates, T. B., Hernandez-Davies, J. E., Sureshchandra, S., Joloya, E. M., Jain, A., ... & Wagar, L. E. (2025). Systems immunology analysis of human immune organoids identifies host-specific correlates of protection to different influenza vaccines. *Cell Stem Cell*, *32*(4), 529-546. https://doi.org/10.1016/j.stem.2025.01.014.

Wilson, J. A., O'Hara, J., Fouweather, T., Homer, T., Stocken, D. D., Vale, L., ... & Teare, M. D. (2023). Conservative management versus tonsillectomy in adults with recurrent acute tonsillitis in the UK (Nattina): a multicentre, open-label, randomised controlled trial. *The Lancet*, *401*(10393), 2051-2059. https://doi.org/10.1016/S0140-6736(23)00519-6.