

Characteristics of Tonsillectomy Surgery Patients at Prof. Dr. R. D. Kandou Manado General Hospital

Rizki R. Najooan^{1*}, Grace Kelly²

^{1,2}Universitas Sam Ratulangi, Manado, North Sulawesi, Indonesia
Emails: rizkinajooan@yahoo.co.id^{1*}, grac3k3lly13@gmail.com²

ABSTRACT

Chronic tonsillitis is a recurrent inflammation of the tonsils that can significantly impact a patient's quality of life. Tonsillectomy, the surgical removal of the palatine tonsils and their capsule, is performed based on specific indications and the Paradise criteria. This study aimed to observe the characteristics of patients who underwent tonsillectomy at Prof. Dr. R. D. Kandou General Hospital Manado from January 2020 to October 2023. This descriptive retrospective study utilized a cross-sectional approach for data collection. Out of a total population of 66 patients who underwent tonsillectomy during the study period, 57 patients met the inclusion and exclusion criteria. The majority of patients were in the teenage age group (12-25 years), accounting for 40 patients (70.2%), with a slight male predominance of 29 patients (50.9%). Most patients were students (19 patients, 33.3%), and the primary complaint was a history of recurrent swallowing pain, reported by 26 patients (45.6%). The most common tonsil size was T3-T3, found in 17 patients (29.8%). The majority of patients were hospitalized for 3-5 days (42 patients, 73.7%), and the most frequent complication was swallowing pain, experienced by 52 patients (91.2%). In conclusion, patients who underwent tonsillectomy surgery predominantly were aged 12-25 years, male, students, presented with recurrent swallowing pain, had T3-T3 sized tonsils, were hospitalized for 3-5 days, and most commonly experienced swallowing pain as a complication.

Keywords: Tonsillitis, Tonsillectomy, Age, Gender, Occupations, Complications.

INTRODUCTION

Tonsils are lymphoid tissue that surrounds the opening of the oral and nasal cavities into the pharynx known as the Waldeyer ring and acts as the first line of defense against bacteria and viruses through the response of B and T lymphocyte cells. (Wetmore, 2020) (Brandtzaeg, 2015) The most commonly infected tonsils are the palatine tonsils and can usually extend to the adenoids and lingual tonsils. Inflammation that occurs in the tonsils is known as tonsillitis or known as inflammation of the tonsils. Tonsillitis can be caused by bacteria or viruses. According

to the International Statistical Classification of Diseases and Related Health Problems (ICD), 10th revision of tonsillitis consists of acute and chronic. (*Keputusan Menteri Kesehatan Tentang Pedoman Nasional Pelayanan Kedokteran Tata Laksana Tonsilitis*, 2018) Chronic tonsillitis causes recurrent inflamed tonsils that can have a severe impact on the patient's quality of life. (Bakar et al., 2018)

Tonsillitis is the 3rd infectious ENT disease after rhinopharyngitis and otitis so that it becomes one of the serious health problems in public health. (Haidara et al., 2019) Tonsillitis can occur at any age, about 15% in adults and about 15%-30% in school-age children aged 5 years to 15 years in the United States. (Haidara et al., 2019) In Indonesia itself, there is actually no latest epidemiological data for all regions in Indonesia. However, there are data from the ENT epidemiological survey in 1994-1996, namely chronic tonsillitis being the second highest prevalence after acute nasopharynx. (Farokah, 2005) In an epidemiological study at one of Bali's hospitals, chronic tonsillitis became one of the 10 most common ENT diseases found from January 2020 to September 2022. (Ide et al., 2022) RSUP Prof. Dr. R. D. Kandou Manado itself has conducted research in 2010-2012 and there were 139 tonsillitis patients. Of all tonsillitis patients, 75 patients (53.96%) suffered from chronic tonsillitis. (Palandeng et al., 2014)

Chronic tonsillitis is generally done conservative therapy and operative therapy in the form of tonsillectomy. (*Keputusan Menteri Kesehatan Tentang Pedoman Nasional Pelayanan Kedokteran Tata Laksana Tonsilitis*, 2018) According to *American Academy of Otolaryngology-Head and Neck Surgery*, Tonsillectomy is a surgical procedure that can or without adenoidectomy by removing the palatine tonsils thoroughly and their capsules by dissecting the peritonsil space between the tonsil capsule and the muscle wall. Generally, there are 2 indications for tonsillectomy, namely absolute indications and relative indications which will then be adjusted to the criteria of paradise. (Wetmore, 2020) (Fowler, 2020) (Kentjono et al., 2016) However, the most common indications of tonsillectomy surgery are respiratory distress during sleep and recurrent throat infections. Tonsillectomy is one of the most common surgical procedures performed on children younger than 15 years of age in more than 500,000 cases each year in the United States. (Bohr & Shermetaro, 2022) One hospital in Iran received a total of 1,043 patients who underwent tonsillectomy surgery in 2016-2017. (Taziki et al., 2020) In Indonesia itself there is no latest national data on the number of surgeries, but there are data from Cipto Mangunkusumo Hospital during 1999 to 2003 showing a decrease in the number of tonsillectomy surgeries, while Fatmawati hospital data during 2002-2004 shows an increase in the number of tonsillectomy surgeries. (Health Technology Assessment (HTA) Departemen Kesehatan Republik Indonesia. *Tonsilektomi Pada Anak Dan Dewasa*, 2004) At Raden Matta Her Jambi Hospital in 2010-2011 there was an increase in the number of tonsillectomy surgery patients. (Sapitri, 2013)

Based on some available data, there has been no similar research conducted in Manado considering chronic tonsillitis is a disease that is quite serious and needs good treatment. Therefore, researchers are interested in observing the characteristics of tonsillectomy surgery patients at RSUP Prof. Dr. R. D. Kandou Manado for the period January 2020 to October 2023.

This study offers novelty by filling the gap in epidemiological and clinical data on chronic tonsillitis in Indonesia, specifically in Manado, which has not been extensively researched before. While tonsillitis is a significant health issue with high prevalence among children and adults in various countries, recent data in Indonesia are very limited. By focusing on the characteristics of tonsillectomy patients at RSUP Prof. Dr. R. D. Kandou Manado from January 2020 to October 2023, this research provides new insights into the prevalence, indications, and treatment outcomes of chronic tonsillitis in this region. This is crucial for enhancing clinical understanding and management of the disease at a local level and can contribute to better national health policies related to tonsillitis.

RESEARCH METHODS

This type of research is a descriptive retrospective with an approach using cross sectional. The sampling method in this study used *total sampling techniques*. This study used medical record data of patients undergoing tonsillectomy surgery from January 2020 to October 2023 at RSUP Prof. Dr. R. D. Kandou Manado. The total population obtained was 66 patient medical record data, and samples that met the inclusion criteria and exclusion criteria were 57 patient medical record data. Inclusion criteria include patients who are recorded at the Medical Record Installation of RSUP Prof. Dr. R. D. Kandou Manado who are indicated and have undergone tonsillectomy surgery, while exclusion criteria include patients whose medical records are not recorded according to the variables to be studied. The 7 variables observed in this study were age, gender, occupation, main complaints, tonsil size, length of treatment, and complications.

RESULTS AND DISCUSSION

Based on research conducted at RSUP Prof. Dr. R. D. Kandou Manado, the following results were obtained:

Age

Table 1. Distribution of tonsillectomy surgery patients by age range

Age group (years)	Total (n)	Percentage (%)
5-11	4	7
12-25	40	70,2
26-45	11	19,3
46-65	1	1,8

>65	1	1,8
Total	57	100

Based on the distribution in table 1, it was found that patients undergoing tonsillectomy surgery at RSUP Prof. Dr. R. D. Kandou Manado for the period January 2020 – October 2023 had the highest age group characteristics in the age range of 12-25 years as many as 40 patients with a percentage of 70.2%.

Gender

Table 2. Distribution of tonsillectomy surgery patients by gender

Gender	Total (n)	Percentage (%)
Male	29	50,9
Female	28	49,1
Total	57	100

Based on the distribution in table 2, it was found that patients undergoing tonsillectomy surgery at RSUP Prof. Dr. R. D. Kandou Manado for the period January 2020 – October 2023, the number of men amounted to 29 patients (50.9%) and women amounted to 28 patients (49.1%).

Work

Table 3. Distribution of tonsillectomy surgery patients by occupation

Job	Total (n)	Percentage (%)
Student	19	33,3
Not yet/not working	18	31,6
Civil Servants	4	7
Private employees	8	14
Housekeeping	6	10,5
Others	2	3,5
Total	57	100

Based on the distribution in table 3, it was found that the most patients who underwent tonsillectomy surgery in students were 19 patients (33.3%) and not yet / not working as many as 18 patients (31.6%).

Main complaints

Table 4. Distribution of tonsillectomy surgery patients based on the main complaint

Main complaints	Total (n)	Percentage (%)
History of recurrent swallowing	26	45,6
A feeling of propping up in the	19	33,3
Others	12	21,1
Total	57	100

Based on the distribution in table 4, it was found that patients who were indicated to undergo tonsillectomy surgery because they had the most major complaints, namely a history of recurrent swallowing pain as many as 26 patients (45.6%).

Tonsil size

Table 5. Distribution of tonsillectomy surgery patients by tonsil size

	Tonsil Size	Total (n)	Percentage (%)	
Based on in Table 5, it was patients with tonsil sizes who most surgery were 17 percentage of Duration of	T4-T4	6	10,5	the distribution found that enlarged T3-T3 underwent the tonsillectomy patients with a 29.8%. treatment
	T3-T3	17	29,8	
	T2-T2	16	28	
	T3-T2	3	5,3	
	T4-T3	1	1,8	
	T2-T3	1	1,8	
	T3-T4	2	3,5	
	T4-T1	1	1,8	
	Unrecorded	10	17,5	
	Total	57	100	

Table 6. Distribution of tonsillectomy surgery patients based on length of stay

Length of treatment	Total (n)	Percentage (%)
3-5	42	73,7
>5	15	26,3
Total	57	100

Based on the distribution in table 6, it is obtained that the most number of days hospitalized for tonsillectomy surgery patients is 3-5 days with a percentage of 73.7%.

Complications

Table 7. Distribution of tonsillectomy surgery patients by complications

Complications	Total (n)	Percentage (%)
Swallowing pain	52	91,2
Bleeding	1	1,8
Others	4	7
Total	57	100

Based on the distribution in table 7 that the most common complications of tonsillectomy surgery were swallowing pain in 52 patients with a percentage of 91.2%.

Discussion

Age

Based on the distribution in table 1, it was found that patients undergoing tonsillectomy surgery at RSUP Prof. Dr. R. D. Kandou Manado for the period January 2020 – October 2023 had the highest age group in the age range of 12-25 years as many as 40 patients with a percentage

of 70.2%. The results of this study are in line with the research of Mustofa et al (Mustofa et al., 2020) at Pertamina Bintang Amin Hospital Bandar Lampung where the highest age group of patients undergoing tonsillectomy surgery was in the age group of 12-25 years as many as 52 patients (56.5%). On the research of Yuliyani et al (Eka Arie Yuliyani et al., 2022) In NTB Hospital, different results were obtained where the age group of 5-10 years (57.2%) was the highest age group in tonsillectomy surgery patients. Differences in research results were also obtained in research by Taziki et al (Taziki et al., 2020) in Iran where the highest age group of tonsillectomy patients is the age group of 5-10 years (50.8%). However, this is also in accordance with previous research that says that school age has a high tendency to develop chronic tonsillitis caused by a rudimentary immune system, infections caused by poor ventilation in crowded classrooms, and repeated infections of tonsils that are not treated properly. (Alrayah, 2023)

Gender

Based on the distribution in table 2, it was found that patients undergoing tonsillectomy surgery at RSUP Prof. Dr. R. D. Kandou Manado for the period January 2020 – October 2023, the number of men amounted to 29 patients (50.9%) and women amounted to 28 patients (49.1%). This is different from the research of Mustofa et al (Mustofa et al., 2020) at Pertamina Bintang Amin Hospital Bandar Lampung found that the female gender is the most patients in undergoing tonsillectomy surgery. On the research of Yuliyani et al (Eka Arie Yuliyani et al., 2022) Also get the female sex that dominates in the number of tonsillectomy surgery patients. However, in the research of Wang et al (Wang et al., 2015), Taziki et al (Taziki et al., 2020), and Parab et al (Parab & Khan, 2019) Obtained male sex patients dominate the number of tonsillectomy surgery patients. Patients with chronic tonsillitis with male sex can be caused by men often being outdoors and exposed to microorganisms, while women often reduce the portion of food for the ideal body shape so that over time it can result in malnutrition so that the body's resistance decreases so that it is more susceptible to tonsil infections. (Alrayah, 2023)²⁰ In addition, the immune system of the male body is lower than that of women where women have estrogen hormones that help the production of IgG and IgA in the blood which have a function as a booster of humoral and cellular antibodies. (Tamara et al., 2018)

Work

Based on the distribution in table 3, it was found that the most patients who underwent tonsillectomy surgery in students were 19 patients (33.3%) and not yet / not working as many as 18 patients (31.6%). Similar results are found in research on the distribution of work in tonsillitic patients at RSUP Prof. Dr. R. D. Kandou for the period 2010 – 2012 the most students with a percentage of 32.37%. (Palandeng et al., 2014) This is in contrast to research on the distribution of chronic tonsillitis patients in Sudan who get the highest number of unemployed or unemployed

people who are associated with low socioeconomic status that affects less nutritious food, unhygienic conditions.(Alrayah, 2023)

Main complaints

Based on the distribution in table 4, it was found that patients who underwent tonsillectomy surgery had the most major complaints, namely having a history of recurrent swallowing pain as many as 26 patients (45.6%). This is in line with research obtained by Vivit Sapitri at Raden Mattaher Jambi Hospital, namely throat pain or swallowing pain is the most common main complaint in patients with chronic tonsillitis indicated by tonsillectomy, which is as many as 30 patients (100%).(Sapitri, 2013) On the research of Yuliyani et al(Eka Arie Yuliyani et al., 2022) At the West Nusa Tenggara General Hospital, results were also obtained in line with the study, namely pain in the throat was the most common main complaint, namely 12 patients (57.2%). This is in accordance with SIGN tonsillectomy clinical guidelines (*Scottish Intercollegiate Guidelines Network*) that recurrent swallowing pain is often the main complaint of chronic tonsillitis patients indicated by tonsillectomy surgery, which is 58.3% per 1,000 population.(Intercollegiate Guidelines Network, 2010)

Tonsil size

Based on the distribution in table 5, it was found that patients with enlarged tonsil sizes T3-T3 who underwent the most tonsillectomy surgery were 17 patients with a percentage of 29.8%. This is in line with research conducted by Yuliyani et al(Eka Arie Yuliyani et al., 2022) In West Nusa Tenggara General Hospital, the size of the tonsils T3-T3 is the most tonsil size performed tonsillectomy surgery, which is 61.9%. This is in line with research conducted at H.Adam Malik Hospital Medan, which found that T3 size was the largest tonsil size carried out tonsillectomy surgery, which was 341 patients with a percentage of 42%.(Mustofa et al., 2020)·(Amalia, 2011) In contrast to the study by Farokah in Semarang with a sample of 145 students aged 7-9 years with chronic tonsillitis, who had T1 and T2 tonsil sizes, 83 students, 62 students with T3 tonsil sizes, and no T4 student tonsil sizes were obtained.(Farokah, 2005) The size of the tonsils can be enlarged due to enlarged crypts and filled with detritus. This is due to tonsil crypts accumulating exfoliated epithelial cells, lymphocytes, other bacteria due to the response of the tonsils to the infection that occurs.(Wetmore, 2020) Therefore, these accumulated bacteria can cause repeated infection of the tonsils.(Mustofa et al., 2020)·(Novialdi & Pulungan, 2010) However, the size of the tonsils is also not a benchmark for tonsillectomy surgery, as long as the patient's condition meets absolute indications, relative indications, and paradise criteria, tonsillectomy will be performed on the patient.

Duration of treatment

Based on the description of the distribution in table 6, it was found that the highest number of hospitalization days for tonsillectomy surgery patients was 3-5 days as many as 42 patients with a percentage of 73.7%. This is in line with the planned length of hospitalization in the clinical

practice guidelines for the action of the ENT-KL section, which is 3 days. (*CLINICAL PATHWAY PENGURUS PUSAT PERHATI-KL Perhimpunan Dokter Spesialis Telinga Hidung Tenggorok Bedah Kepala Leher Indonesia*, 2015) In the questionnaire study conducted by Ahmad et al (Ahmad et al., 2010), of the 433 patients who could be contacted back, 58% of patients went home the same day after surgery was a good thing. About 76% of patients reported no problems on the first night at home after undergoing surgery with 3% requiring medical assistance that night, and half being readmitted to hospital. (Ahmad et al., 2010) In addition, in patients who undergo a length of treatment of more than 5 days, it is mostly associated with light bleeding due to decaying eschar. (*Tonsillectomy: Procedure Details and Recovery*, n.d.)

Complications

Based on the description of the distribution in table 7 that the most common complications felt by patients after tonsillectomy surgery were swallowing pain as many as 52 patients with a percentage of 91.2%. This is in accordance with research conducted by Zagolski et al (Zagólski et al., 2016) and Palacios et al (Álvarez Palacios et al., 2017) The number of patients who experience pain is more dominant than bleeding. This is also according to a study conducted in Denmark on 614 patients who underwent tonsillectomy, that is, patients who suffered more pain predominated than those who experienced bleeding. However, in a systematic review, bleeding on days 5 to 10 was the most common complication. (*CLINICAL PRACTICE GUIDELINE Post-Tonsillectomy Bleeding*, 2018) (Tolska, 2019) Generally, this pain will last about 7-10 days after tonsillectomy and the peak of the pain is felt about 5-7 days after surgery. (Sheet, n.d.)

CONCLUSION

Based on the results and discussion of research on the characteristics of tonsillectomy surgery patients at RSUP Prof. Dr. R. D. Kandou Manado for the period January 2020 – October 2023 using the sampling method, namely *total sampling*, it was found that the total population obtained was 66 patient data. There were 57 patient data from 66 patient data that met the inclusion criteria and exclusion criteria. The results of this study showed dominant patients undergoing tonsillectomy surgery with an age range of 12-25 years, male gender, work as a student/student, the main complaint in the form of a history of repeated swallowing pain, T3-T3 tonsil size, length of treatment in the range of 3-5 days, and the most complications were swallowing pain. The advice that can be given is that further research needs to be done on the degree of pain felt by patients during the main complaint and the condition after tonsillectomy surgery. Then, medical record data is also so that it can be equipped in such a way that it can further facilitate the process of data collection and future research.

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