

The Connection between Children's Tonsillitis Symptoms and Eating Habits

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ABSTRACT

Introduction: Tonsillitis, an inflammation of the tonsils, can affect all ages but mainly occurs in children. Tonsils can be caused by infections or viruses. Consumption patterns are the actions of a person or group, notably individuals, in choosing what food to consume every day. Foods that contain oil, flavorings such as MSG (Monosodium Glutamate), and preservatives, when consumed in excess, will cause symptoms of itching or pain in the throat and will cause infection in the oral cavity, causing inflammation of the palatine tonsils. In addition, eating foods that are too cold, hot, sour, or spicy can irritate the pharyngeal and esophageal mucosa and trigger inflammation. This study aims to determine the relationship between eating habits and tonsillitis symptoms in children.

Result: 120 respondents who stated that they were at risk, 74 people or 51.4% had tonsillitis symptoms, while 46 people or 31.9% did not have tonsillitis symptoms. Of the 24 respondents who stated that they were not at risk, 9 people, or 6.3%, had symptoms of tonsillitis, while 15 people, or 10.4%, did not have symptoms of tonsillitis.

Conclusion: This indicates that the McNemar test results obtained at the first hypothesis (H1) are accepted due to the p-value of 0.000 (<0.05), indicating a substantial correlation between food consumption patterns and symptoms of tonsillitis in children.

Keywords: Food consumption patterns; tonsillitis symptoms; children



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Introduction

The infection of the pharyngeal tonsils is known as tonsillitis. Inflammatory response can influence the lingual tonsils and adenoids, two further regions in the rear of the throat. Children also frequently get tonsillitis, even if it is rarely noted in children under two years old year⁽¹⁾. Epidemiologic data show that chronic tonsillitis is most common in 5-10 years old and young adults aged 15-25 years⁽²⁾.

Tonsillitis can cause difficulty swallowing, heat, swelling, headaches in joints and muscles, chills, whole body aches, and usually pain in the ears. Excess secretions make patients complain of difficulty swallowing, and the back of the throat will feel thickened⁽³⁾.

The habit of eating fried foods, if food is not processed hygienically, and open food storage can be contaminated by germs. Refrigerated drinks can even cause vasoconstriction so that blood vessels shrink and the number of white blood cells decreases, which can also stimulate and stretch epithelial cells in the tonsils, so that over time it will cause tonsil hypertrophy. Consuming fast food has an impact on the immune system, which is weakened; finally, the body is susceptible to disease, especially tonsillitis⁽⁴⁾.

In addition, unhealthy food is also categorized as unclean food. Many experts recommend choosing foods that don't have a lot of excess oil and use additives such as food coloring, flavoring, and aroma enhancers⁽⁵⁾.

According to information released by the Ministry of Health in Indonesia in 2012, about 23% of Indonesians suffer from tonsillitis⁽⁶⁾. In various countries, namely in the United States, according to the National Center of Health Statistics, in 2011 was 24.9%. Cases of tonsillitis in Khyber hospital, Pakistan, in 2011-12 were 37.37% of all diseases in the ENT-KL field⁽⁷⁾. In the province of South Sulawesi, the prevalence of patient visits and the number of patients with Acute Tonsillitis found in each hospital on average ranks fourth, namely 657 (8.1%).⁽⁸⁾ Recent data from healthcare facilities in Makassar also indicate that tonsillitis remains a common clinical condition. A study conducted at Ibnu Sina Hospital, Makassar, reported 86 cases of tonsillopharyngitis between January 2023 and May 2024, with the majority of patients experiencing symptoms such as fever (87.21%) and sore throat (75.58%).⁽¹⁶⁾

Based on the description above and the rising prevalence of tonsillitis, the author conducted a study on the relationship between food consumption patterns and tonsillitis symptoms in children.

Methods

In this study, a cross-sectional design and analytical survey method were used. The sampling technique uses total sampling (n=192), with a total of 144 respondents (n = 144) included in this study. Data collection for this study was conducted from July to August 2023 at SDN 71 Rappojawa in the Tallo sub-district of Makassar city. Data were collected using a questionnaire and examined directly.

Data were analyzed using the McNemar test Statistic.

Result

Considering the outcomes of univariate analysis, the results are as follows:

Table 1: Food consumption pattern

Food Consumption Pattern Results	N	%
At risk	120	16,7 Percent
Not at risk	24	83,3 Percent
Total	144	100 Percent

Source: Primary Data

Table 1 shows that the results of food consumption patterns resulted in a risky number of 12 people or 16.7%. While those who are not at risk are 24 people, or 83.3%.

Table 2: Symptoms of Tonsillitis

Tonsillitis Symptoms	Frequency	Percentage
Yes	83	57,6 Percent
No	61	42,4 Percent
Total	144	100 Percent

Source: Primary Data

Table 2 shows that the results of tonsillitis symptoms were found in as many as 83 people or 57.6%. While those who did not have tonsillitis symptoms were 61 people or 42.4%.

Table 3: Relationship between food consumption patterns and tonsillitis symptoms

Food Consumption Patterns	Tonsillitis Symptoms		Total	P value
	Yes	No		
At Risk	74 (51,4%)	46 (31,9%)	120	0,000
Not At Risk	9 (6,3%)	15 (10,4%)	24	
Total	83	61	144	

Source: Primary Data

Table 3 shows that out of 120 respondents who stated that they were at risk, 74 people, or 51.4%, had symptoms of tonsillitis, while 46 people, or 31.9%, did not have symptoms of tonsillitis. Of the 24 respondents who stated that they were not at risk, 9 people or 6.3% had symptoms of tonsillitis while 15 people or 10.4% did not have symptoms of tonsillitis. This indicates that most students have symptoms of tonsillitis. Based on the McNemar test results, the p-value is 0.000 (<0.05) so it is determined that the initial theory (H1) comes from acknowledged, which implies that there is a strong correlation between children's tonsillitis symptoms and their eating habits.

Discussion

The study's findings show that participants who have a habit of consuming cold drinks and experiencing tonsillitis symptoms are more than respondents who have food consumption that is not consume food and experience tonsillitis symptoms. The findings of this study are consistent with those of studies carried out

by Wahyuni (2017) on children of SDN 005 Sungai Pinang, Sungai Pinang Samarinda District, which amounted to 265 respondents. It was found that as many as 139 respondents (52.6%) experienced tonsillitis symptoms, and there was a substantial correlation between eating patterns and tonsillitis symptoms⁽⁹⁾. This disease is especially common in children who eat and drink carelessly. Even though the food and drinks consumed by the child do not guarantee hygiene or cleanliness⁽¹⁰⁾. The findings of this study are consistent with those reported by Basri SWG et al. (2022), which showed that there is a significant relationship between eating habits and the incidence of throat inflammation in elementary school children. The study emphasized that poor dietary patterns, including the consumption of unhealthy and unhygienic foods, contribute to the occurrence of tonsillitis symptoms in children.

Unhealthy eating habits can affect one's health. Cooking oil functions as a heat-conducting medium, adds savory flavor, and adds nutritional value to the calories in foods such as cooking oil and margarine. The cooking oil we consume daily is closely related to our health⁽¹¹⁾.

Food high in oil content can trigger pharyngeal irritation. If consumed continuously, it can cause inflammation of the tonsils. Consuming too much cold water can trigger inflammation of the tonsils, because cold water can stimulate and stretch the epithelial cells in the tonsils, so that over time it will cause tonsil hypertrophy⁽¹²⁾.

Not only foods that contain oil, but excessive use of flavorings can lead to health problems. One of the developments in the field of food production is the number of foods that use addictive substances in the form of food flavoring. The addictive substance MSG (Monosodium Glutamate) is a sodium salt of glutamic acid used in managing food and as a food additive. The fact is that consuming MSG turns out to be very vulnerable for humans from early childhood to old age. Frequent consumption of flavoring ingredients will cause harm to the well-being of the body, and various types of diseases will appear, one of which is tonsillitis⁽¹³⁾.

Fast Food serves as a type of food that is convenient, packaged, and/or easy to serve, simply compiled. Fast food typically comes in the shape of sandwiches, kebabs, salads, prepared side dishes, fast noodles, and nuggets⁽¹⁴⁾. Ultimately, unhealthy dietary behaviors compromise the immune system, making children more vulnerable to recurrent infections such as tonsillitis. Finally, the body is susceptible to disease, especially tonsillitis⁽⁴⁾.

Due to involution at puberty, the function of the tonsils will decrease first at the age of five years, then rise at ten years old, and finally fall once more at fifteen years old, resulting in a decrease in the number of antibodies produced and a decrease in tonsil function⁽¹⁵⁾.

Conclusion

This study demonstrates a significant association between food consumption patterns and tonsillitis symptoms in children. Therefore, it is essential to provide education to students and the elementary school community on the intake of “at-risk” foods, such as those containing excessive oil, flavorings, and extremely cold drinks. Furthermore, the parents should be continuously informed about nutritious food choices to ensure children’s health is maintained both at home and at school. Although this study provides a preliminary understanding of the link between dietary habits and tonsillitis symptoms, further research involving comprehensive medical examinations is necessary to confirm these findings clinically.

Conflicts of Interest

There is no conflict of interest

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