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# **The Effect of Tonsillectomy With or Without Adenoidectomy on the Child's Life Style**

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ:

قَالَ إِنَّمَا الْعِلْمُ عِنْدَ اللَّهِ  
وَأُبَلِّغُكُمْ مَا أُرْسِلْتُ بِهِ  
سورة الأحقاف- الآية 23.

صدق الله العظيم.

## Gratitude \*

I would like to thank my supervisor and family for their help and support .

## Introduction:

The Palatine tonsils are located in the lateral oropharynx. They are found between the palatoglossal arch anteriorly and palatopharyngeal arch posteriorly, known as Palatine arches or pillars. The tonsils are composed of lymphatic tissue and are component of Waldeyer's ring along with adenoids (nasopharyngeal tonsil), tubal tonsil and lingual tonsil. They serve as an important first line defense against inhaled or ingested pathogens by providing initial immunological barrier to insults [1]. Tonsillitis is inflammation of the tonsils, which most often effects on children between preschool-age and mid teenage years (5- 15 years). Most of cases of tonsillitis caused by viral infections but bacterial infections also may cause tonsillitis the most common bacteria is streptococcus pyogenes [2]. The common sign and symptoms of acute tonsillitis include red, swollen tonsil, white or yellow coating or patches on tonsil, sore throat, difficult or painful swallowing, fever, bad breath, scratchy, muffled or throaty voice, neck pain or stiff neck, enlargement and tender lymph nodes. In young children who unable to describe how they feel so signs include drooling due to difficult or painful swallowing, refuse eat, unusual fussiness [3]. Tonsillitis leads to many problems may be local or systemic, local problems include most commonly peritonsillar abscess or called quinsy due to spread infection into tissue around tonsils, which cause severe pain and can interfere with swallowing and even breathing. Also spread infection into retropharyngeal and parapharyngeal space to cause abscess. Systemic problems include spreading infections to many site of the body lead to sinusitis, otitis media, meningitis, brain abscess, scarlet fever, glomerulonephritis, rheumatic fever, obstructive sleep apnea, septicemia jugular vein thrombosis, also lead to chronic or recurrent tonsillitis [4]. Chronic tonsillitis or recurrent tonsillitis is described as more than seven episodes in one year, more than five episodes annually for more than two years, more than three episodes a annually for more than three years, or two weeks or more of lost school in one year due to tonsillitis, tonsil may be atrophy or hypertrophy. The clinical features of sore throat plus the presence of temperature more than 38.3°C, cervical lymphadenopathy (tender lymph nodes or more than 2cm), tonsillar exudates or positive culture for group A beta-hemolytic streptococcus. Because this recurrent inflammation, tonsil need to remove. Tonsillectomy is one of the more commonly performed operations in childhood. Which mean removal tonsils [3, 4, 5].

Tonsillectomy is indicated in many conditions which include chronic tonsillitis seven episodes in a single year , peritonsillar abscess, in airway obstruction due to tonsillar hyperplasia and if malignant disease is suspected which epithelial origin not accurate in childhood but lymphoma rarely affects the tonsils in childhood because of tonsillar asymmetry or unilateral tonsillar hyperplasia [6]. Complication following tonsillectomy include early complication (primary hemorrhage and respiratory compromise) and late complication include (dehydration and secondary hemorrhage). which posttonsillectomy hemorrhage occurs in approximately 2% to 3% of pediatric patients. Whereas respiratory compromise after tonsillectomy to treat obstructive sleep apnea as 6.4% of patients. Other less common complications include atlantoaxial subluxation, mandible condyle fracture ,infection and Eustachian tube injury . Many study show improvements in behavioral problems and quality of life after tonsillectomy such as improvement in eating, sleeping, temperature after days or weeks of the tonsillectomy[7, 8].

## Patient and method:

The study was performed in a retrospective manner at Baquba Teaching Hospital and AL-Iraq private surgical clinic. We selected sixty patients randomly, which age between 3 to 15 years old after six months or more of doing tonsillectomy for doing the research. All procedures were carried out in general anesthesia after orotracheal intubation. Tonsillectomy was performed either as “cold” or as “hot” tonsillectomy. The “cold” technique was done using scissors to incise the mucosa and a raspatorium to remove the tonsil from its fossa.

We select the patient files randomly. Inclusion criteria were the name of the patient, gender , age ,telephone number and name of doctor who did the operation to facilitate information taken from patient himself or parent patients. Then we contacted the parents of the patient to full special questionnaire on GBI (Glasgow Benefit Inventory ) questionnaire

The Glasgow Benefit Inventory (GBI), a retrospective measure, was used to assess the long term outcome after tonsillectomy. In previous clinical studies the GBI was proved to be reliable, valid and responsive. The GBI consists of 24 core retrospective questions and is answered on a 5-point Likert scale, which indicates the amount of change due to a surgical intervention ("Since your operation, do you feel better or worse about yourself" much worse, a little or somewhat worse, no change, a little or somewhat better, much better). The GBI can be used at any stage and measures the HRQOL the person experiences and how health problems affect this. The GBI is sensitive to a change in health status brought about by tonsillectomy (The Glasgow Health Status Manual). The questionnaire is divided into a total score and 3 subscales: a general health subscale (Questions:1, 2, 3, 4, 5, 6, 9, 10, 14, 16, 17 and 18), a social support subscale (Questions 7, 11, 15), and a physical health subscale (Questions: 8, 12, 13). The GBI scores were scaled in standard fashion to range from – 100 to 100, with positive scores implying an improvement in HRQOL due to tonsillectomy, and negative scores implying a decrease in HRQL after surgery. A visual analogue scale (0 to 10) was given to measure the patient's general feeling related to their tonsil disease. In addition to the GBI we appended five questions about special problems after tonsillectomy.

## **Results:**

Each question in questionnaire contain on score from 1 to 5 so that score one given to the answer with worst change in the health status and score 5 given to answer with best change in the health status. So Table no. one doing by many equations :

### **Total score**

-sum all the responses (Qu.1-18) divided by 18(to obtain an average response score) subtract 3 from the average response score, multiply by 50 .

### **General subscale score**

Sum 12 of responses(Qu.1,2,3,4,5,6,9,10,14,16,17 and 18) divided by 12 ,subtract 3 from average response score ,multiply by 50 .

### **Social support score**

Sum 3 of the responses (Qu.7,11,15) divided by 3 ,subtract 3 from the average response score ,multiple by 50 .

### **Physical score**

Sum 3 of the responses (Qu.8,12,13) divided by 3 ,subtract 3 from the average response score, multiply by 50.

Table no.2 The statistical analysis system program was used to detect the effect of difference factor in study parameters.Total 60 patient which Male number 36 and percentage 60% while female number 24 and percentage 40% . Which age class 3-6 year count 16 male and 11 female ,age class between 7to 10 year count 8male and 6 female and age class between 11to 15 count 12 male and 7 female .

Table no.1

sex	age in year	physical score	social score	general subscale score	Total score
male	6	83.3	-33.3	50	41.6
male	8	66.6	-33.3	85.3	50
male	9	83.3	16.6	54.1	58.3
female	7	100	33.3	54.1	58.3
male	6	83.3	16.6	50	50
male	12	0	0	-8.3	-5.5
female	6	0	0	-8.3	-5.5
female	6	66.6	0	58.3	50
male	3	83.3	0	54.1	50
male	6	83.3	33.3	50	52.7
male	13	100	-16.6	45.8	44.4
male	5	0	0	58.3	38.8
male	6	100	16.6	50	38.8
female	6	83.33	-50	50	38.8
male	4	100	0	66.6	61.1
male	3	100	0	54.1	52.7
male	13	100	33.3	58.3	61.1
female	6	100	-33.33	70.8	44.4
male	5	100	16.6	50	52.7
female	11	66.6	0	50	47.2
male	5	100	-16.6	50	47.2
male	11	83.3	16.6	54.1	52.7
male	11	66.6	-33.3	58.3	44.4
male	11	83.3	-33.3	54.1	44.4
female	9	100	66.6	54.1	55.5
female	11	100	16.6	45.8	44.4
female	6	100	0	58.3	55.5
male	9	100	33.3	66.6	61.1
female	5	100	50	70.8	72.2
female	12	83.3	0	41.6	44.4
male	5	83.3	33.3	58.3	58.3
male	12	83.3	33.3	50	52.7
male	3	83.33	-16.6	50	38.8
male	6	100	0	20.8	30.5
female	6	100	0	25	33.3
female	9	83.3	33.3	33.3	41.66
female	12	100	50	58.3	63.8
male	6	66.6	0	45.8	41.6
male	9	50	-16.5	-16.6	-11.1
female	14	83.3	-0.6	50	44.4
female	4	100	-16.6	50	47.2
male	6	50	0	45.8	38.8
female	5	83.3	33.3	58.3	58.3
female	7	50	-16.6	41.6	33.3
male	14	66.6	16.6	50	50
female	5	83.3	33.3	54.1	55.5
male	12	100	-16.6	191.6	41.6
male	9	66.6	16.6	62.5	55.5

female	15	83.3	33.3	45.83	50
female	7	66.6	16.6	54.1	41.6
female	12	33.3	33.3	33.3	30.5
male	13	100	50	54.1	55.5
male	10	100	50	45.1	55.5
female	4	66.6	33.3	25	33.3
male	5	100	-16.6	12.5	25
male	8	0	-33.3	8.3	0
male	13	-16.6	-33.3	50	25
male	15	50	0	12.5	16.6
female	9	66.6	0	37.5	47.22
male	8	100	16.6	37.5	50



## Statistical analysis : Table no.2

Gender	age class		age in year	physical score	social score	general subscale score	Total score
Male	3 - 6 year	Mean	5.00	82.28	2.08	47.89	44.91
		N	16.00	16.00	16.00	16.00	16.00
		Std. Deviation	1.15	26.16	18.09	13.34	9.85
		Std. Error of Mean	.29	6.54	4.52	3.34	2.46
	7 - 10 year	Mean	8.75	70.81	6.25	51.34	47.20
		N	8.00	8.00	8.00	7.00	7.00
		Std. Deviation	.71	34.22	30.74	24.50	21.20
		Std. Error of Mean	.25	12.10	10.87	9.26	8.01
	11 - 15 year	Mean	12.50	75.74	1.39	61.71	44.40
		N	12.00	11.00	12.00	11.00	11.00
		Std. Deviation	1.24	30.15	28.80	44.89	13.15
		Std. Error of Mean	.36	9.09	8.31	13.54	3.96
	Total	Mean	8.33	77.60	2.78	53.07	45.22
		N	36.00	35.00	36.00	34.00	34.00
		Std. Deviation	3.50	28.85	24.36	28.97	13.39
		Std. Error of Mean	.58	4.88	4.06	4.97	2.30
Female	3 - 6 year	Mean	5.36	80.28	4.55	52.06	48.85
		N	11.00	11.00	11.00	10.00	10.00
		Std. Deviation	.81	29.65	30.80	15.97	12.16
		Std. Error of Mean	.24	8.94	9.29	5.05	3.85
	7 - 10 year	Mean	8.00	77.75	22.20	45.78	46.26
		N	6.00	6.00	6.00	6.00	6.00
		Std. Deviation	1.10	20.20	29.15	9.48	9.40
		Std. Error of Mean	.45	8.25	11.90	3.87	3.84

	11 - 15 year	Mean	12.43	78.54	18.94	46.40	46.39
		N	7.00	7.00	7.00	7.00	7.00
		Std. Deviation	1.51	23.02	20.34	7.78	9.84
		Std. Error of Mean	.57	8.70	7.69	2.94	3.72
	Total	Mean	8.08	79.14	13.16	48.70	47.43
		N	24.00	24.00	24.00	23.00	23.00
		Std. Deviation	3.23	24.70	27.78	12.27	10.42
		Std. Error of Mean	.66	5.04	5.67	2.56	2.17
Total	3 - 6 year	Mean	5.15	81.47	3.09	49.50	46.43
		N	27.00	27.00	27.00	26.00	26.00
		Std. Deviation	1.03	27.09	23.56	14.25	10.74
		Std. Error of Mean	.20	5.21	4.53	2.79	2.11
	7 - 10 year	Mean	8.43	73.79	13.09	48.78	46.77
		N	14.00	14.00	14.00	13.00	13.00
		Std. Deviation	.94	28.28	30.04	18.60	16.18
		Std. Error of Mean	.25	7.56	8.03	5.16	4.49
	11 - 15 year	Mean	12.47	76.83	7.86	55.76	45.17
		N	19.00	18.00	19.00	18.00	18.00
		Std. Deviation	1.31	26.90	26.84	35.58	11.70
		Std. Error of Mean	.30	6.34	6.16	8.39	2.76
	Total	Mean	8.23	78.23	6.93	51.31	46.11
		N	60.00	59.00	60.00	57.00	57.00
		Std. Deviation	3.37	27.03	26.06	23.63	12.23
		Std. Error of Mean	.43	3.52	3.36	3.13	1.62



## Dissection :

Tonsillectomy is one of the most popular surgical operations performed in the world [1,2]. It is the most commonly done procedure in the paediatric patient population [3]. In contrast to paediatric tonsillectomy, which has clear criteria for surgery, there is continuous debate over adult tonsillectomy indications, particularly in individuals with chronic tonsillitis[9]. Suspicion of malignant disease, recurrent acute tonsillitis (according to the American Academy of Otolaryngology-Head and Neck Surgery physician documentation of seven episodes in one year, five episodes per year for two years, or three episodes per year for three years) are all indications for tonsillectomy in adults[10].

Only a few trials with a small number of patients have been conducted until now[7]. Our investigation involved a significant number of patients. We asked 60 patients who had surgery at Baquba Teaching Hospital and AL-Iraq private surgical clinic in the previous two years to fill out our survey. With a range of 3 to 15 years and a mean age of 5 years for males and 5.38 years for females. The survey response rate was low, but it was comparable to other studies (38 percent).

To assess the effects of tonsillectomy on health, we employed the Glasgow Benefit Inventory (GBI), a postintervention questionnaire. The GBI was created specifically to track patients' health changes following otolaryngological procedures [8]. The questionnaire has been thoroughly researched and validated. The GBI is a sensitive tool for assessing changes in patient health following surgical operations, particularly otolaryngological procedures. We conducted a retrospective assessment to offer information that was different from serial change data, being more sensitive and accurately associated with patients' satisfaction, according to Fischer et al. Following that, we noticed a significant improvement in all GBI values[8,9].

This shows the useful effect on patients with persistent tonsillitis. The advantage is more unmistakable within the common subscale and the physical health subscale than within the social back sub scale. This result bolsters the theory that tonsillectomy has an affect not as it were on the physical but too on mental wellbeing of patients enduring from inveterate tonsillitis. The combination of these two discoveries causes an advancement in wellbeing scale. Our discoveries prove the comes about of Stanley et al. who appeared by a five address meet of 60 patients that

patients who have repetitive throat diseases early tonsillectomy can make strides post-interventional fulfillment, wellbeing and utilization of therapeutic assets. [6] In differentiate to their work we utilized approved and well considered instrument.

## Conclusion

In appropriately selected patients with chronic tonsillitis, either a cold or a hot tonsillectomy improves their health. To obtain an optimal perioperative as well as a satisfying long-term result in patients with chronic tonsillitis, recapitulating ENT surgeons should be familiar with both tonsillectomy procedures.

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