



POST –OPERATIVE TONSILLECTOMY PAIN ASSESSMENT IN ADULT AND PEDIATRIC AGE GROUPS- A COMPARATIVE STUDY

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ABSTRACT **Introduction:** Post-operative tonsillectomy pain exhibits distinct patterns in adult and paediatric patients, influenced by various factors including age, analgesic protocols, and pain management strategies. Paediatric patients often report severe pain, particularly in the first few days' post-surgery, with studies indicating that 75% experience significant pain on swallowing during this period[1]. In contrast, adults tend to have a different pain experience, with a higher likelihood of receiving stronger analgesics. **Study Design:** A prospective study. **Study Centre:** Tertiary Centre. **Material & Methods:** This was a hospital-based study conducted at Department of Otorhinolaryngology, PES Hospital, Kuppam, A.P. This study included all the patients undergoing tonsillectomy procedures at PES Hospital, Kuppam. **Results And Conclusion:** Post operative assessments demonstrated the paediatric and adult patients exhibited similar patterns of pain intensity and severity following surgery. While minor differences were observed- such as increased frequency of pain episodes in paediatric patients and a higher incidence of persistent pain in adults during the early postoperative period- this variation was not clinically or statistically significant.

KEYWORDS : Tonsillectomy, pediatric patients, post-operative pain, throat pain, difficult swallowing**INTRODUCTION:**

Tonsillectomy, one of the most commonly performed surgical interventions worldwide, is primarily indicated for chronic and recurrent tonsillitis, obstructive sleep apnea, and peritonsillar abscesses[2]. Despite its high prevalence and the procedural advancements made over the decades, the post-operative phase remains fraught with challenges, chief among them being the effective management of pain[3]. Post-tonsillectomy pain not only impairs patient recovery and prolongs convalescence but also affects overall healthcare costs and influences the adoption of specific surgical techniques. By understanding the multifaceted nature of post-operative pain, clinicians can better tailor strategies to improve recovery trajectories.

AIM:

1. To compare the pain threshold in adult and paediatric patients.
2. To determine the recovery time required to overcome post-operative pain in tonsillectomy patients.
3. To measure the sickness absenteeism in adult and paediatric patients

Study Design: This was across-sectional study**Method:****Inclusion Criteria:**

Patients who were underwent tonsillectomy is divided into 2 groups based on the age group as shown below,

GROUP A: All patients from 6 years to 17 years [Paediatric]**GROUP B:** All patients from 18 years to 65 years [Adult]**Exclusion Criteria:**

1. Patients unwilling to participate in this study
2. Patients with chronic medical illness
3. Serology positive individuals

Study Tools:

The data was collected using a pretested questionnaire which contains socio-demographic data, throat examination, visual analogue scale [VAS], details related to pain (intensity, frequency, analgesics consumption, hours of sleep post tonsillectomy), recovery time and sickness absenteeism.

RESULT:**Table 1: VAS Pain Score Comparison**

VAS score	Group A (Paediatric)		Group B (Adult)		t-value	p-value
	Mean	SD	Mean	SD		
POD 1	5.52	2.53	4.72	2.60	1.5573	0.1226
POD 7	5.28	3.26	4.68	2.92	0.9692	0.3348
POD 14	4.50	2.82	3.92	2.99	0.9988	0.3204

VAS pain scores gradually declined over the three observed post-operative days (POD 1, 7, and 14) in both groups. Although paediatric patients reported slightly higher mean scores at each interval, the differences were not statistically significant (POD 1: $p = 0.1226$, POD 7: $p = 0.3348$, POD 14: $p = 0.3204$), suggesting a comparable pain trajectory between children and adults.

Table 2: Days Absent From Work/school

Days absent from work/school	Group A (Paediatric)	Group B (Adult)
Mean	8.66	9.20
SD	3.88	3.51
t-value	-0.7304	
p-value	0.4669	

The average number of days absent from work or school did not differ significantly between the paediatric (mean = 8.66) and adult groups (mean = 9.20), with a p-value of 0.4669.

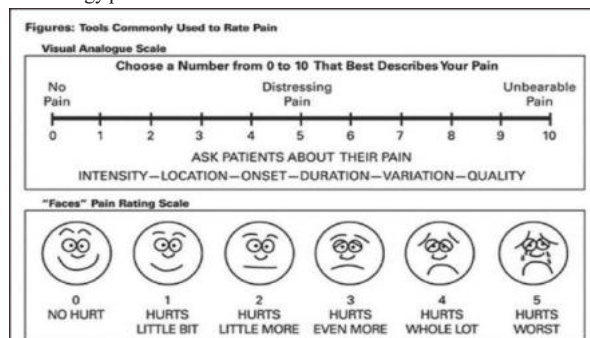
Table 3: Time To Resume Daily Routine

Daily routine resumption	Group A	Group B
Mean	10.14	10.08
SD	3.34	3.43
t-value	0.0885	
p-value	0.9296	

Time taken to resume daily routine was also similar (mean ≈ 10 days for both groups), with no significant difference observed ($p = 0.9296$).

DISCUSSION:

The present study offers a unique perspective on functional recovery after tonsillectomy by evaluating the time taken to resume daily routine activities in both paediatric and adult populations-a variable not previously explored in comparative clinical literature. As no existing studies have focused on this specific parameter across age

**Figure 1: Visual Analogue Scale**

groups, these findings serve as original contributions, offering fresh insights into postoperative recovery timelines.

The lack of statistically significant differences in VAS scores across all time points suggests that age may not be a decisive factor in the intensity of postoperative pain following tonsillectomy, at least in the short-term recovery period. However, the consistently higher mean scores in the paediatric group may still be clinically relevant, possibly warranting closer monitoring and more tailored pain management strategies in younger patients. Factors such as psychological response to surgery, communication limitations, and parental anxiety may all contribute to this trend in children.

while paediatric patients reported slightly higher VAS scores at all measured intervals, the differences between age groups did not reach statistical significance. This suggests comparable postoperative pain experiences between children and adults, reinforcing the need for effective, age-appropriate pain management protocols for both groups throughout the recovery timeline.

The mean number of days absent in the paediatric group was 8.66 days, with a standard deviation (SD) of 3.88 days. In comparison, the adult group had a slightly higher mean of 9.20 days, with an SD of 3.51 days. Although adults, on average, required marginally more time to return to work than children did to return to school, the difference between the two groups was not statistically significant. The t-value was -0.7304, and the p-value was 0.4669, indicating that this variation is likely due to random chance rather than a consistent age-related pattern.

The results showed that paediatric patients resumed their daily routine in an average of 10.14 days (SD = 3.34), while adult patients took an average of 10.08 days (SD = 3.43). These nearly identical means indicate a highly comparable recovery duration between the two groups. Statistical analysis confirmed that the difference in mean values was not significant, with a t-value of 0.0885 and a p-value of 0.9296. The very high p-value suggests that the observed variation was entirely random and not influenced by age.

CONCLUSION

Post operative assessments demonstrated the paediatric and adult patients exhibited similar patterns of pain intensity and severity following surgery. While minor differences were observed- such as increased frequency of pain episodes in paediatric patients and a higher incidence of persistent pain in adults during the early postoperative period- this variation was not clinically or statistically significant. Overall, the visual Analog Scale (VAS) scores, pain severity classifications and analgesic consumption were comparable across both groups on post operative days 1, 7 and 14. These finding suggests that effective management of postoperative pain in both paediatric and adult population is achievable with appropriate protocols.

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