



SYMPTOM SCORE IN POSTOPERATIVE TONSILLECTOMY PATIENTS USING COLD DISSECTION AND ELECTROCAUTERY METHOD

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ABSTRACT Introduction- Tonsillectomy with or without adenoidectomy is one of the most commonly performed surgical procedures. Standard method of tonsillectomy is cold dissection. Other methods include tonsillectomy using monopolar or bipolar electrocautery, laser, harmonic scalpel, and bipolar radiofrequency. These newer techniques were developed to reduce the bleeding risk and post-operative pain but the same was not reported in various clinical studies.

Aims- A study was performed to compare the post-operative pain improvement in tonsillectomy patients using standard cold dissection and electrocautery method.

Settings and design-: A prospective study was done in patients with chronic tonsillitis dividing them into two group I and II.

Methods and material: Each group had 30 patients that underwent tonsillectomy using electrocautery and cold dissection method.

Results- In case of tonsillectomy using cold dissection method post-operative pain score on visual analogue scale was 67.33 % on post-operative day 1 and 14.67% on postoperative day 7 while in electrocautery method it was 82.67% on post-operative day 1 and 40% on postoperative day 7.

Conclusion- Patients treated with electrocautery method had more difficulty in food intake, required longer course of analgesics and in some cases antibiotics which adds to overall morbidity when compared to cold dissection method.

KEYWORDS : Cold dissection tonsillectomy, electrocautery, Visual analogue scale

INTRODUCTION

Tonsillectomy with or without adenoidectomy is one of the most commonly performed surgical procedures. In last 60 years the technique for performing tonsillectomy has not changed significantly. In 2-4% of all patients undergoing tonsillectomy, most serious complication is delayed haemorrhage. However moderate to severe intensity pain is frequently reported by patients and this may last from 7 to 10 days. For which some patients will require readmission to the hospital for treatment of their pain and management of dehydration due to decreased oral intake of fluids secondary to this pain².

To avoid these unwanted consequences, various modifications of standard cold dissection tonsillectomy have been promoted over the years. These include dissection of the tonsil using laser, harmonic scalpel, and bipolar radiofrequency, monopolar or bipolar electrocautery^{5,6}. These newer techniques were developed to reduce the bleeding risk and post-operative pain but the same was not reported in various clinical studies⁷.

OBJECTIVES

To compare the post operative pain improvement in tonsillectomy patients using cold dissection and electrocautery method.

MATERIALS AND METHODS

STUDY DESIGN- A Randomized controlled study

STUDY PERIOD- Six months (March to August 2016)

SOURCE OF DATA- All patients admitted for undergoing tonsillectomy willing to participate in study in Downtown Hospital, Guwahati.

SAMPLE SIZE- 30 patients undergoing tonsillectomy using electrocautery or cold dissection method in age group of 5 to 30

INCLUSION CRITERIA- Patients with chronic tonsillitis.

METHODOLOGY

30 patients in the age group of 5 to 30 years who underwent tonsillectomy with or without adenoidectomy using electrocautery and cold dissection method.

All patients underwent tonsillectomy or adenotonsillectomy under general anaesthesia following standard protocols of asepsis and haemostasis under the guidance of a senior ENT consultant. All patients received fentanyl (0.25 mcg/kg) intravenously, for pain during the immediate postoperative period. An antiemetic (Ondansetron) was administered as and when required in the immediate post-operative period which was otherwise uneventful in all the cases.

Ice pack was applied immediately after the surgery for a period of 15 to 30 min on both the sides. In the post-operative period, all the patients were given injection Diclofenac sodium 1.25 mg/kg body weight 4 h after surgery. Intravenous Ringer Lactate was given according to body weight in the post-operative period. Oral feeds were commenced 6 h after surgery in the form of plain ice cream/cold milk. From the first post-operative day, patients were advised to start Hydrogen peroxide gargles and to consume adequate fluids and semi-solid foods while avoiding fruit juice as well as toast, cookies and other foods with "rough edges". They were encouraged to resume their normal non-spicy diet at the earliest.

The study subjects were divided into two groups by allotting them with alternate numbers such that Group A consisted of 15 patients with odd numbers and Group B had 15 patients with even numbers.

Group A: Patients in which tonsillectomy was done using cold dissection method

Group B: patients in which tonsillectomy was done using electrocautery method

Post-operative pain was assessed clinically according to the Visual Analogue Scale (Figure 1) as well as motor activity both during rest and deglutition on day 1 and day 7. Visual analogue score was assessed on a 0-10 scale (0: no pain; 10: severe excruciating pain, Table 1). Intermediate or delayed complications were not reported in any case. All patients were discharged on day 1 after assessment and were told to follow up on day 7 for further assessment or if they developed bleeding, fever or increasing pain. They were

discharged on a 5 day course of antibiotic (Amoxicillin 40 to 50 mg/kg/body weight in 3 divided doses) along with an analgesic, antacid and hydrogen peroxide gargles. Patient compliance was 100%¹.

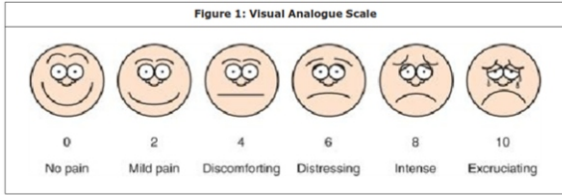


Table 1: Assessment of Pain Score

10	• Pain at rest/ disturbs sleep/ no relief with medications/ continues pain
8	• Not able to swallow/ pain on opening mouth/ speaking
6	• Pain during swallowing liquid
4	• Pain during swallowing solid
2	• Occasional pain
0	• No pain

RESULTS AND ANALYSIS

In case of tonsillectomy using cold dissection method post operative pain score on visual analogue scale was 62.67 % on post-operative day 1 and 20% on post-operative day 7 while in electrocautery method it was 77.33% on post-operative day 1 and 40% on post-operative day 7.

Therefore, on comparing post-operative pain score on visual analogue scale on post-operative day 1 and day 7 using cold dissection method and electrocautery method, statistically significant difference was found.

	Mean	N	Std. Deviation	Std. Error Mean	
Pair 1	electrocauteryday7	4.0000	15	1.30931	.33806
	Colddissectionday7	2.0000	15	1.30931	.33806
Pair 2	Electrocauteryday1	7.7333	15	1.27988	.33046
	colddissectionday1	6.2667	15	1.48645	.38380

Paired Samples Correlations

Pair	Correlation	Sig.
Pair 1	Electrocauteryday7 & colddissectionday7	-.167 .553
Pair 2	Electrocauteryday1 & colddissectionday1	.040 .887

Paired Samples Test

	Mean	Paired Differences			t-value	df	Sig (2-tailed)	
		Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				lower				upper
Pair 1	electrocauteryday7 - Colddissectionday7	2.0000	.51640	.89244	3	3.873	14	.002
Pair 2	Electrocauteryday1 - colddissectionday1	1.4667	.49634	.40213	2.53120	2.955	14	.010

Both treatments show significant difference at 1 % level $p \leq 0.01$

DISCUSSION

our study compared post-operative pain score on visual analog scale in tonsillectomy using cold dissection and electrocautery method, It showed statistical significant difference in post-operative pain on post-operative day 1 and post-operative day 7. Post-operative pain is more on doing tonsillectomy using electrocautery method when compared

to cold dissection.

Previous studies (Wexler DB et al,RF leinbach,SJ markwell et al.) showed significantly more patients with pain more worse on using electrodissection than on cold knife tonsillectomy. Which coincides with our studies.

CONCLUSION

Patients treated with electrocautery method had more difficulty in food intake, required longer course of analgesics and in some cases antibiotics which adds to overall morbidity when compared to cold dissection method.

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