

Tonsillectomy – A Comparative Study of GA or LA

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ABSTRACT

Background: Ethically it is our jurisdiction to decide upon the medical procedure we undertake after weighing the risk benefit ratio. Tonsillectomy is conventionally operated under general anesthesia but it has its own merits and demerits. The aim of the study was to analyse the better procedure.

Methods: Hundred patients were operated in the medical college over period of two years in HIMS Barabanki and Govt medical college Kannauj. Seventy patients were operated under general anesthesia and another thirty under local anesthesia. **Results:** The total operation time, VAS, blood loss, complications, cost effectiveness, bed occupancy, patient turnover rate and patient satisfaction was better in surgical exercise done under local anesthesia when compared to general anesthesia. **Conclusions:** Tonsillectomy done under local anesthesia definitely has an edge over the general anesthesia.

Key words: Tonsillectomy, General Anesthesia, Local Anesthesia.

INTRODUCTION

Tonsillectomy is a common operative procedure for Otorhinolaryngologist and is usually done for chronic recurrent tonsillitis, tonsillolith, papilloma tonsil, subsequent to quinsy, OSA and as approach for other procedures. In our traditional medical practice tonsils are usually operated under general anesthesia by dissection method. However, there are many different ways to remove the tonsils like coblator, laser, electrocautery, harmonic scalpel etc.

Tonsillectomy under local anesthesia is not new but not preferred in children, apprehensive females, although has edge over general anesthesia in cooperative patients. The patients were very satisfied and happy to recommend others.

METHODS

This was a prospective study. Hundred patients were selected randomly over period of two years at HIMS, Barabanki and government medical college, Kannauj.

Of the hundred patients seventy were operated under general anesthesia and thirty under local anesthesia. All the patients selected were investigated and when found medically fit were selected for study. Specific relevant investigation like platelet count and INR was analyzed.

General anesthesia was given by Dragers work station with inbuilt ventilator. Nasal and oral intubation was used depending upon whether the adenoid was also to be removed or not. Local tonsillectomy was performed after spraying 10% xylocaine thrice and then painting with 4% xylocaine, lastly, we blocked the palatine nerves and superior pole, inferior pole and anterior tonsillar pillar with mixed solution of 2% injection xylocaine and 0.5% bupivacaine. Two hours before local tonsillectomy, two tablets of phnorgan is given and injection fortwin and calmpose just before surgery intramuscularly.

We followed our traditional dissection method and used snare to remove the tonsils in both the groups. Various parameters like time taken, blood loss, post-operative pain, complication rate and patient satisfaction was analyzed.

RESULTS

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Hundred patients selected were between ten to fifty years age group and of these sixty five were male and thirty five female. Maximum patients were teens (Table 1). About seventy patients were operated under general anesthesia and thirty patients were operated under local anesthesia. The average operating time for tonsillectomy under general anesthesia was sixty-eight minutes whereas for local tonsillectomy it was just twenty-five minutes. The average blood loss for general anesthesia tonsillectomy is 80 ml and for local tonsillectomy is 35 ml. The average hospital stay is 74 hours and 26 hours for general anesthesia and local anesthesia tonsillectomy respectively (Table 2). The visual analogue scale for the satisfaction for general anesthesia and local anesthesia was 3.5 and 1.25 respectively (Table 3).

Table No 1: Demographic details of the patients

| S. No | Age | Sex | General/Local |
|-------|----------|-----------|---------------|
| 1 | 10-20=60 | M:F=39:21 | 43/17 |
| 2 | 21-30=24 | M:F=16:8 | 16/8 |
| 3 | 31-40=10 | M:F=6:4 | 7/3 |
| 4 | 40-50=6 | M:F=4:2 | 4/2 |
| Total | 100 | M:F=65:35 | 70/30 |

Table 2: Average hospital stay

| S.No | Anaesthesia | Avg Operation time | Avg Blood loss | Avg hospital stay |
|------|---------------------|--------------------|----------------|-------------------|
| 1 | General Anaesthesia | 68 minutes | 80 ml | 74 hours |
| 2 | Local Anaesthesia | 25 minutes | 35ml | 26 hours |

Table No 3: Visual Analogue Scale

| S. No | Age | General/Local | VAS=G/L |
|-------|----------|---------------|--------------|
| 1 | 10-20=60 | 43/17 | 5/2 |
| 2 | 21-30=24 | 16/8 | 4/2 |
| 3 | 31-40=10 | 7/3 | 3/1 |
| 4 | 41-50=6 | 4/2 | 2/0 |
| Total | 100 | 70/30 | Avg=3.5/1.25 |

DISCUSSION

Tonsillectomy is a routine procedure and bread and butter for the many surgeons. The local tonsillectomy definitely has an edge over the general anesthesia in many respects. The majority of the patients had opted for general anesthesia instead of local anesthesia tonsillectomy probably because of apprehension.

The amount of time taken in preparation and operation was significantly higher in the general anesthesia group than local group which McClairen's data too indicated statistically significant differences in the methods.^[1] The amount of blood loss seen in the general anesthesia case was higher than the local anesthesia group; this was proved by earlier studies too. In our study, average blood loss in local

and general tonsillectomy was 35mL and 80mL respectively. In patients who were operated, the average blood loss was 42 mL in the local tonsillectomy group with no cases of postoperative hemorrhage, compared with 198 mL in the general anesthesia group with two cases of postoperative hemorrhage.^[2]

The postoperative complications were more in the local tonsillectomy than general tonsillectomy.^[3,4] However, there was no significant difference in the incidence of postoperative complications or morbidity.^[1] But in our study the complications were more in the general tonsillectomy group than the local tonsillectomy group (Table no 4). The incidence of immediate and delayed postoperative bleeding in a series of patients was extremely low i.e. four [0.28%] of 1428 cases.^[5] The postoperative nausea, vomiting and pain was significantly reduced after injecting dexamethasone and local anesthetic infiltration. The patients in our study were given inj perinorm routinely and vomikind on emergency. The local anesthesia was given mixing the 5mL of bupivacaine and lignocaine each, this was injected in the oral cavity along the palatine foramen, upper pole anterior pillar and lower pole. The pain postoperatively was less in the local than in the general anesthesia group. The study demonstrated that the both subcutaneous and intravenous injections of ketamine, at the end of the operation, were safe and effective for post-tonsillectomy pain control. Ketamine reduced postoperative analgesic medications consumption without increasing the risk of complications,^[7] some studies have refuted that no significant difference is observed postoperatively (Peritonsillar infiltration of tramadol provided pain control in the first 6 hours post-tonsillectomy which was comparable to that of lidocaine.^[9]

Table 4: complications in the general tonsillectomy group than the local tonsillectomy group

| S No | Complications | Local | General |
|------|---------------|----------------------|---------|
| 1 | Bleeding | Primary Secondary | 1 2 |
| 2 | Pain | VAS | 1.25 |
| 3 | Nausea | 4 | 16 |
| 4 | Vomiting | 1 | 20 |

Tonsillectomy under local anaesthesia, in suitable patients, is a safe alternative to tonsillectomy under general anaesthesia, and that considerable resources can be saved if the operation is performed with local anaesthesia.^[10,11] Local anaesthetic does seem to provide a modest reduction in post-tonsillectomy pain. Topical local anaesthetic on swabs appears to provide a similar level of analgesia to that of infiltration without the potential adverse effects and should be the method of choice for providing additional post-operative analgesia.^[12]

Postoperatively, we too gave tab lidocam (lignocaine & benzoxonium chloride 1mg each) to reduce the pain and patients were very happy because of less pain. Injection of morphine too was quite good in postoperative pain reduction.^[13]

CONCLUSION

After the present study, we conclude that the local anesthesia tonsillectomy was a good, safe and cost effective alternative to general anesthesia tonsillectomy in cooperative patients.

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