

Complications of Tonsillectomy Experienced at Lady Reading Hospital Peshawar

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ABSTRACT

Objective: To determine the incidence of complications in patients undergoing tonsillectomy at lady reading hospital Peshawar.

Material and methods: This descriptive prospective study was carried out at the department of Ear, Nose, Throat, Head and Neck Surgery, Postgraduate Medical Institute Lady Reading Hospital Peshawar from Jan. 2008 to Dec. 2010. In these 2 years duration 4557 tonsillectomies were performed but only 35 patients developed complications after tonsillectomy. After admitting these patients were put on injectable third generation antibiotics with a dose of 50mg/ kg body weight in divided doses. After resuscitating patients were evaluated completely. Most of the complications were treated conservatively.

Results: This study was conducted on 35 cases having post-tonsillectomy complications constituting 19 male and 16 female, with male: female ratio of 1.18: 1. The age of the patients ranged from 07-42 years with mean age of $20.89 \pm S.D 8.08$ years. After admitting the patients most of the patients (40%) were treated conservatively while 34.28% patients underwent various surgical techniques for controlling complications of tonsillectomy. Secondary hemorrhage (2-10 days) was on top (0.26%) followed by primary hemorrhage in 6 cases (0.13%) and other rare complications.

Conclusion: It is concluded from our study that postoperative bleeding was the commonest complication of tonsillectomy which was controlled mainly conservatively.

Key words: Tonsillectomy, Complications, Hemorrhage.

INTRODUCTION

Tonsils are masses of immune cells that are most commonly found in lymph glands (lymphoid tissue). When they are inflamed, these cells can cause a number of hardships for the patient, including sore throat, difficult breathing, bad breath and sleep apnea, among other symptoms¹. Tonsillectomy remains one of the most common surgical procedures performed in the world². Various techniques have evolved over the years, however, neither the indications for tonsillectomy nor the complications associated with the procedure have changed much³. Although in order to minimize the complications of tonsillectomy many different methods such as blunt dissection and cutting the tonsillar base by snare, dissection with electrocautery and laser surgery have been named but in many centers the surgeons still believe that tonsillectomy is the best method⁴. Although generally considered a safe procedure, tonsillectomy has significant potential for complications, especially in the pediatric population⁵. Complications of tonsillectomy can be divided into early and delayed depending upon the

duration between surgery and presentation of complication⁶. The early complications of tonsillectomy include bleeding, airway obstruction, pulmonary edema, meningitis, septicemia, subcutaneous emphysema, pulmonary emphysema, foreign bodies aspiration, retropharyngeal abscess, unwanted trauma to surrounding structures and death while late complications include uvulo-pharyngeal insufficiency, nasopharynx stenosis, salivary fistula from the submandibular gland to the tonsillar fossa, cervical vertebrae complications such as Grisel syndrome^{2,6,7}. Postoperative hemorrhage is the most common and serious complication and its incidence is 3%⁸. Intraoperative bleeding (<24 hour) may be related to the surgical technique or bleeding disorder. Delayed postoperative hemorrhage (>24 hour) predominantly occurs on the fifth to seventh day postoperatively⁹.

As tonsillectomy is the commonest surgery performed in our setting and complications of this surgery are also not uncommon. So the aim of this study was to look for complications of tonsillectomy and their management in our setting.

MATERIAL AND METHODS

This descriptive prospective study was carried out at the department of Ear, Nose, Throat, Head and Neck Surgery, Postgraduate Medical Institute Lady

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Reading Hospital Peshawar from Jan. 2008 to Dec. 2010. In these 2 years duration 4557 tonsillectomies were performed but only 35 patients developed complications after tonsillectomy and were included in the study. The patients presented to ENT ward with complications but tonsillectomy was performed in other hospital and those who were lost from follow up were excluded from the study. All those patients having post-tonsillectomy complications presented to ENT ward were admitted into ward and intravenous line was maintained. These patients were put on injectable third generation antibiotics with a dose of 50mg/ kg body weight in divided doses. Most of the complications were controlled conservatively and in some of the cases surgical interventions were carried out. After resuscitating the patients detailed history was taken and thorough examination was done. Mucosal lining of upper aero-digestive tract was examined and systemic examination was also carried out. Routine investigations were performed in all cases while specific investigations were carried out in some of the patients to find out the cause of complications. An informed consent was taken from all the patients explaining risks and benefits of surgical procedures. All these patients were followed up to 6 weeks and the data was obtained on a pre-designed proforma and the study was approved from hospital ethical committee. The statistical analysis was performed using the statistical program for social sciences (SPSS version 15). The frequencies and percentages were presented for qualitative variables and Mean±SD were presented for quantitative variables.

RESULTS

This study was carried out on 35 cases with post-tonsillectomy complications constituting 19 male and 16 female, with male: female ratio of 1.18: 1. The age of the patients ranged from 07-42 years with mean age of 20.89±S.D 8.08 years. Most of the patients (60%) having post-tonsillectomy complications presented to ENT ward between 2-10days after discharging from ward (Table 1). After admitting the patients most of the patients (40%) were treated conservatively while 34.28% patients were treated with interventional techniques (Table 2). About 8 patients (22.85%) received blood transfusion because they were in shocks. Five patients (14.28%) received one pint of blood and 3 patients (8.5%) received multiple blood transfusions. Post-tonsillectomy bleeding was the commonest complication. Secondary hemorrhage (2-10 days) was noticed in 12 cases (0.26%) followed by primary hemorrhage in 6 cases (0.13%) and reactionary hemorrhage in 5 cases (0.10%) (Table 3). In majority

of cases (n-16,45.71%) the cause of post-tonsillectomy complication was infection, in 8 cases (22.85%) extensive dissection of tonsillar fossa was causing complications while in 2 cases (5.71%) under lying blood disorder was responsible for complication.

Table 1: Duration between tonsillectomy and complications (n=35).

Duration after surgery	=n
Per operative complication	3(8.5%)
Post operative complications	
1 st day	4(11.42%)
1-2 day	5(14.28%)
2-10 days	21(60%)
> 10 day	2(5.71%)

Table.2: Treatments modalities applied in this study (n=35).

Treatment Applied	=n
Conservative treatments	
Observation	14(40%)
Blood transfusion	8(22.85%)
Interventional treatments	
Ligation of bleeders	5(14.28%)
Stitching pack in tonsillar fossa	4(11.42%)
Cauterization of bleeders	3(8.5%)
Ligating external carotid artery	1(2.85%)

Table 3: Types of post-tonsillectomy complications in this study (n=4557).

Type of complication	=n
Secondary hemorrhage	12(0.26%)
Primary hemorrhage	6(0.13%)
Reactionary hemorrhage	5(0.10%)
Clot formation in tonsillar fossa	4(0.08%)
Edema of uvula and soft palate	3(0.06%)
Nasal regurgitation	2(0.04%)
Rhinolalia aperta	1(0.02%)
Parapharyngeal abscess	1(0.02%)
Emphysema Neck	1(0.02%)

DISCUSSION

Tonsillectomy is still one of the most common surgeries performed in our country. Its various complications specially bleeding which is the most common complication has caused the otolaryngologists to name this surgery difficult operation and it can be very complicated and dangerous in some cases. It is indispensable that any surgeon who intends to perform tonsillectomy must have the due knowledge of the possible complications and their prevention. In this study complications of tonsillectomy were observed more in males which simulate other studies^{7,8}. The reason is that males prefer surgery rather conservative treatment for tonsillitis. The mean age of patient was 20 years which is in accordance to the study of

Imad¹⁰ and colleges who had mean age of 17 years because tonsillectomy is commonly performed in 2nd and 3rd decade of life.

The complications of tonsillectomy can be divided into early and late one depending upon the duration between the occurrence of complication and surgery. In our study most of the complications (60%) were recorded at 2-10 days of surgery which simulates the study of Qureshi¹¹ having 80% patients presented after 5 days of surgery. Most of the patients with complications presenting at 1st post operative week having infections in the tonsillar fossa, as observed in this study. These complications can be treated with injectable antibiotics. In this study 62% of complications were controlled with conservative treatment which is supported by study of Qureshi¹¹ who also controlled 76% of complications with conservative treatment only.

In an attempt to reduce these unwanted consequences, various modifications of standard tonsillectomy have been promoted over the years. These include dissection of the tonsil using monopolar or bipolar electrocautery, laser, harmonic scalpel, and bipolar radiofrequency.^{2,5} When first introduced, all of these techniques were touted to cause less pain or have a lower incidence of bleeding than traditional sharp dissection.⁹ In this study 13 cases (37%) were treated with different surgical techniques to overcome the complications. Similarly Ashrafi SK¹² reported complications only in 2% patients using cold steel dissection method. Chowdhury MA¹³ also had post tonsillectomy complications in 0.37% patients using harmonic scalpel. Schmidt R¹⁴ compared intracapsular tonsillectomy with electro tonsillectomy and found that complications were less in intracapsular tonsillectomy technique (p-.001).

In this study postop bleeding was the commonest complication and secondary hemorrhage was on top (0.26%), followed by primary hemorrhage (0.13%) and reactionary bleeding (0.10%). Silva and colleagues¹⁵ also found postop bleeding as the commonest complication (1.32%). Similarly Schmidt R¹⁴ also reported secondary hemorrhage (occurring > 24 hour of surgery) the most common complication (1.1%) of tonsillectomy. Post op bleeding in our study was less than the study of Naini AS¹⁶ who reported that bleeding was on top (1.46%) amongst complications of tonsillectomy. Similarly Rabbani MZ¹⁷ also found post-tonsillectomy bleeding 2.5% which was more than our results.

In this study rare complications of tonsillectomy were edema of uvula and soft palate (n-3, 0.06%), nasal regurgitation (n-2, 0.04%) and one case each of nasal regurgitation, parapharyngeal abscess and emphysema neck. Rare complications of

tonsillectomy are also reported by Leong SC¹⁸, Uzun C¹⁹ and Boccolini C²⁰ which include intraoperative vascular injury, subcutaneous emphysema, mediastinitis, Eagle syndrome, atlantoaxial subluxation, cervical osteomyelitis, taste disorders and grisel's syndrome. However postop bleeding is the commonest complication of tonsillectomy and rare complication can also be experienced.

CONCLUSION

It is concluded from our study that postop bleeding is the commonest and dangerous complication of tonsillectomy which are mostly treated with antibiotics only. Sometime surgical intervention is required for controlling extensive bleeding. Infection is the main cause of postop bleeding and can be prevented if picked in time and treated properly.

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