

Post Tonsillectomy Complications and Role of Antibiotics

FARRUKH MEHMOOD, RIZWAN AKBAR BAJWA, KHAWAR AWAIS BUTT

ABSTRACT

Adenotonsillectomy is one of the most common surgical procedure performed all around the world. Post operative morbidity is an important issue. We analysed 400 patients who were divided into two groups 1&2 each consisting of 200 patients. Group 1 were given perioperative antibiotics while group 2 were managed with analgesics alone and post operative complications like reactionary haemorrhage, secondary haemorrhage, pyrexia, odynophagia, delayed oral intake and wound infection were observed and compared between the two groups.

Key words: adenotonsillectomy, postoperative role of antibiotics

INTRODUCTION

Tonsillectomy is one of the commonest surgical procedure performed to reduce the unease of thousands of patients every year world over. The morbidity associated with this operation includes pyrexia, odynophagia, delayed oral intake, haemorrhage etc. The associated complications leading to exaggerated stay in hospital with loss of work hours of the involved family members causes loss of comfort and increased monetary discredit to all involved. So we chose the topic for study to reassess the pros and cons and compare the results with other studies done for the same purpose. The study was conducted at Avicenna medical college Lahore and King Abdul Aziz university hospital Riyadh, Saudi Arabia from January 2010 to January 2012 in two years time.

MATERIALS AND METHODS

This was a prospective study in which 400 cases were included and divided into two groups. Group 1 included 200 cases who were prescribed prophylactic antibiotics postoperatively for a period ranging from 7 to 10 days. Group 2 included 200 patients who were not prescribed antibiotics postoperatively. All the cases were followed up for a period of four weeks. Most of the patients (71%) were day surgery cases who were discharged same day after an observation of six to eight hours. The adult patients & patients with any systemic disease like sickle cell disease or syndromic congenital abnormalities like down's syndrome were kept for one day in the hospital.

Distribution of cases was as under:

Sex distribution:

Males	240(60%)
Females	160(40%)

Department of ENT and Head & Neck Surgery, Akhtar Saeed Medical College, Lahore

Correspondence to Dr. Farrukh Mehmood, Assistant Professor Email: farrukh988@hotmail.com

Age distribution

Below 10 years	230(57.4%)
10 to 20 years	120(30%)
20 to 30 years	36(9%)
>30 years	14(3.5%)

Surgical distribution:

Tonsillectomy alone	220(55%)
Adenotonsillectomy	180(45%)

Associated systemic/syndromic illness

Allergic rhinitis	28(7%)
Sickle cell disease	12(3%)
G6PD deficiency	8(2%)
Down's syndrome	4(1%)
OSA/snoring	20(5%)
Lymphoma Tonsil	2(5%)
Sq. Cell Ca Tonsil	2(.5%)

Hospital stay

Day cases	284(71%)
Admitted cases	116(29%)

Postoperative Complications

Reactionary haemorrhage

Group1	4(1%)
Group 2	4(1%)

Secondary haemorrhage

Group1	2(0.5%)
Group 2	4(1%)

Fever

Group1	4(1%)
Group 2	8(2%)

Odynophagia

Group1	8(2%)
Group 2	16(4%)

Delayed oral intake

Group 1	4(1%)
Group 2	8(2%)

Infection

Group 1	4(1%)
Group 2	6(1.5%)

The statistics of this study show that most of our patients were in paediatric age group. 230 patients (57.4%) were under 10 years of age. 120 patients (30%) were from 10 to 20 years of age. 36 patients

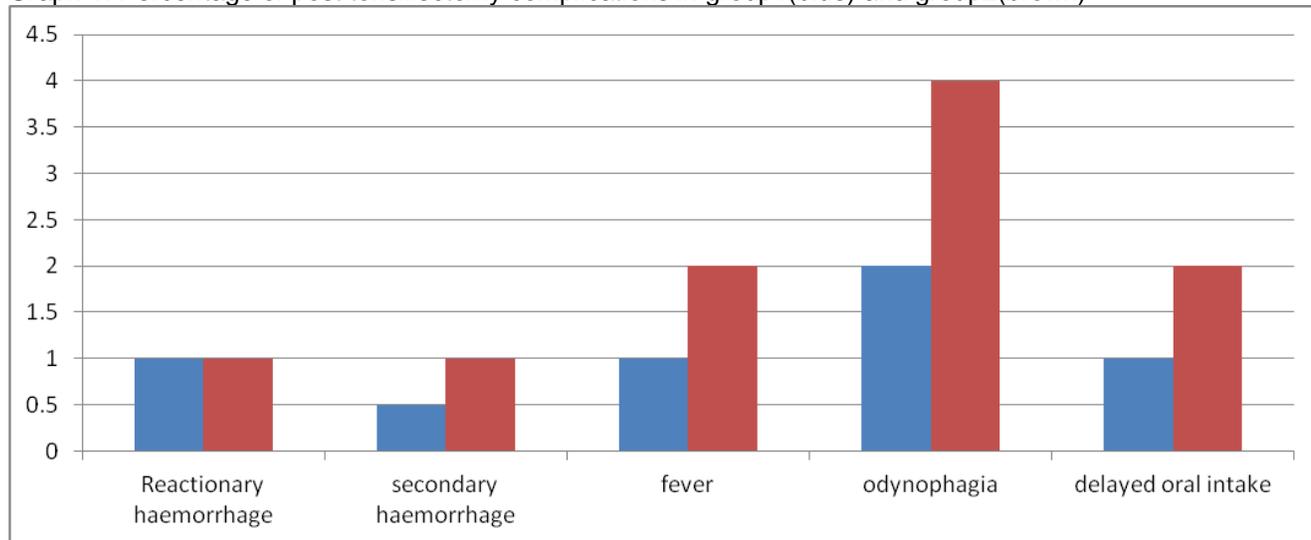
(9%) were between 20 and 30 years of age and 14 patients (3.5%) were more than 30 years of age. Sex distribution was such that 240 patients (60%) were males and 160 patients (40%) were females. Thus the incidence of the surgical procedure for Adenotonsillar diseases was commoner in males than females. Tonsillectomy alone was performed in 220 patients (55%) while Adenotonsillectomy was performed in 180 patients (45%). Thus the tonsillectomy alone was performed in comparatively larger number of patients than adenotonsillectomy. Some of our patients had associated systemic medical illnesses. 28 patients (7%) were having Allergic rhinitis while 12 patients (3%) were having sickle cell disease with occasional history of going into sickling crisis. 8 patients (2%) had G6PD deficiency. 4 (1%) patients were cases of Down's syndrome. 20 patients (5%) had obstructive sleep apnea with snoring and mouth breathing. We received 4 patients of malignant disease among which 2 patients had Lymphoma tonsils and two patients had squamous cell carcinoma tonsillar region which were proven by biopsy and histopathology and were referred to oncology department for further management. 282 of our patients (71%) underwent surgery as day cases while 116 (29%) were admitted cases.

RESULTS

The study was conducted to evaluate the use of antibiotics in Adenotonsillectomy cases. The results were marginally indicating in favour of use of prophylactic perioperative antibiotics. The incidence of reactionary haemorrhage was 1% in both groups. However secondary haemorrhage was 50% less in cases who were given prophylactic antibiotics.

The incidence of post operative pyrexia was found in 4 patients from group 1 while in 8 patients in group 2 which shows that patients with antibiotics were suffering less than others. Two percent of group 1 patients had Odynophagia as compared to four percent in group 2 which indicates less morbidity in 1st group. Delayed oral intake was observed in 4 patients in group 1 as compared to 8 patients in group 2 which shows difference in outcomes in two groups. The postoperative wound infection with pus formation is rare and was found in 1% in group 1 as compared to 1.5% in group 2. These results clearly indicate less morbidity in cases who were given antibiotics than the patients who were not given.

Graph 1: Percentage of post tonsillectomy complications in group 1 (blue) and group 2 (brown)



DISCUSSION

Being one of the commonest surgical procedure performed world over the tonsillectomy and use of antibiotics in this surgery is of paramount importance. This involves a huge amount of spending and also morbidity associated with the procedure can also lengthen or shorten the hospital stay of the patient.

The study by Lyers et al¹ May 2006 indicated that the antibiotic group returned to normal oral intake, on average, 1 day sooner than the controls. This difference was found to be statistically significant with a 95% confidence interval of 0.5-1.6 days. An additional assessment of three qualitative reports also suggested the use of perioperative antibiotics for adenotonsillectomy was associated with less post-operative pain. Our experience tallies with this study

as the patients with antibiotics therapy had less odynophagia, fever & trismus and were in better form more of times in 1st day post op rounds and were more cheerful and ready to go home early.

Grandis et al² Feb 1992 studied One hundred and one adult patients undergoing tonsillectomy for chronic/recurrent tonsillitis which was prospective, randomized, double-blind, placebo-controlled study in which ticarcillin disodium and clavulanate potassium (Timentin) or placebo was administered intravenously at the time of surgery and for 12 hours postoperatively. The patients that received oral amoxicillin and clavulanate potassium (Augmentin) therapy or placebo for an additional seven days. They found that the patients who received antibiotics fared consistently better in the immediate postoperative period compared with the placebo group. Specifically, patients in the antibiotic group experienced significantly less mouth odor, were able to tolerate a regular diet sooner, and resumed their normal activities earlier than did patients who received placebo. Patients who received antibiotics experienced fewer days with mouth odor ($p=0.004$). In addition, on postoperative days 3 to 5, the antibiotic group was eating a regular diet ($p=0.05$) and had returned to their routine activities earlier ($p=0.045$) when compared with the placebo group. Perioperative antibiotic therapy was well tolerated and was effective in minimizing symptoms after tonsillectomy.

Mann et al³ concluded that mean aerobic and anaerobic oral bacterial counts were decreased in topical antibiotic treatment groups compared with the placebo group on the first postoperative day. Significantly less postoperative pain and mouth odor were reported for both Cleocin ($P=0.014$ and $P=0.005$ respectively) and Augmentin/Timentin ($P=0.026$ and $P=0.05$, respectively) topical treatment groups when compared with the placebo group.

Zogolski O et al⁴ concluded that there were significant differences in the course of convalescence related to perioperative antibiotic in children after

adenotonsillectomy, but strict indications for antibiotics in these patients are rare.

Dhiwakar et al⁵ concluded that Antibiotics significantly reduced the number of subjects manifesting fever and duration of halitosis and marginally reduced the time taken to resume normal activity and our results also comply with their findings

CONCLUSION

The use of antibiotics was found to be helpful in reducing the postoperative morbidity in all kinds of adenotonsillectomy cases with variable indications for this procedure. The improved satisfaction level of the treating physician regarding smooth postoperative recovery was another unseen benefit of prophylactic use of antibiotics in these cases.

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