THE INCIDENCE OF POST TONSILLECTOMY BLEEDING IN CHILDREN AND ADULTS

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ABSTRACT

This retrospective study was conducted in Ear, Nose and Throat (ENT) department at Misurata Central Hospital, during the period from January 2006 to December 2007. The aim is to evaluate the incidence of post tonsillectomy haemorrhage in relation to the age, gender and post operative period. The files of 253 patients were reviewed. 153 patients were younger than 15 years and 100 patients aged 15 years and older. All patients underwent tonsillectomy with or with out adenoidectomy. Six patients (2.4%) experienced bleeding within 8 days postoperatively, 4 (1.6%) out them developed the bleeding in the first 24 hours. The bleeding was more in the adult group than the paediatric group (4% vs 1.5%). Compared with other studies, the result was almost the same.

KEY WORDS: It is worth noting that awareness of this factor should help in improving the outcome.

INTRODUCTION

Post tonsillectomy bleeding is the most significant complication of tonsillectomy. The haemorrhage is classified as reactionary (primary) or secondary. The reactionary bleeding occurs up to 24hrs, but the vast majority occurs within the first 8 hrs. However, the secondary bleeding occurs after 24hrs, and classically occurs at the 10th day[(1)].

In fact, reactionary bleeding is dangerous in 2 ways: first, in the phase during which the patient is recovering from anaesthesia, before cough reflex is fully established, blood in the airway can result in laryngeal spasm or asphyxiate the patient by mechanically occluding the air way. Second, severe bleeding, may leads to circulatory failure and death. Furthermore, it may be needed to retake the patient to the OT to stop the bleeding. The second anaesthesia, of course, is hazardous and carries risk of mortality because the patient has already exposed to anaesthesia, has blood in the airway, is hypovolaemic from blood loss and also my has a stomach full of blood[(1)].

In regards to secondary haemorrhage, it is not as common as reactionary bleeding, and usually less severe than reactionary bleeding. But it must be taken seriously as it does has mortality rate.

THE AIM OF THE STUDY

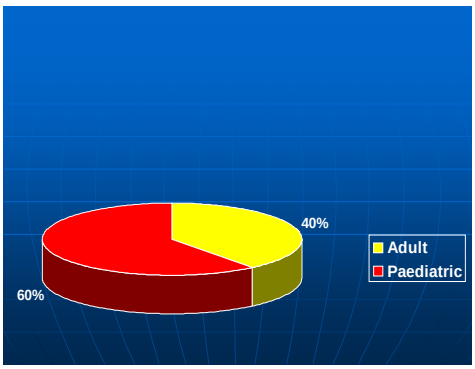
The aim of this study to establish the incidence of post tonsillectomy bleeding in children and adults in relation to age, gender and operative period .

PATIENTS AND METHODS

Over two years (2006& 2007), the files of 253 patients who underwent tonsillectomy with and without adenoidectomy at Misurata Central Hospital were studied .The indications of surgery were recurrent tonsillitis, previous attack of quinsy and upper respiratory tract obstruction. Patient who had risk of haemorrhage was excluded from the study. The age of patients was ranged from 2,5- 44 years. The patients are divided into paediatric group (less than 15 years old) and adult group (aged 15 or more). This classification is based on the opinion of many paediatric society as they use 15 years old as borderline for the adulthood. The surgery was done under G A by dissection technique. The haemostasis was achieved mainly by cautry or by ligature. The patients refrained from drinking for 4 hours and from eating for 24 hours postoperatively, and discharged next day. The haemorrhage is classified according to its severity into: mild (controlled without surgical intervention), moderate (with surgical intervention), and severe (surgical intervention and blood transfusion), and all of them were included in our study.

RESULTS

The files of 253 patients who underwent tonsillectomy at Misurata Central Hospital were studied respectively. The pediatric group was 153 patients (60%), while the adult group was 100 patients (40%) (Fig 1). Males to females ratio in paediatric group was 1 : 1.3, while in the adult group it was 1 : 2.1. Out of the paediatric group, only 2 patients (1.5%) experienced bleeding (one male & one female) postoperatively, compared with 4 patients (4%) (one male & 3 females) out of the adult group (figure 1).



(Figure 1) Age distribution

Among the children, the bleeding was only secondary in both genders at 1.5% in the male group and

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1% in the female group. However, among the adult patients, the haemorrhage was only primary in both groups, (3.2%) in males and (4%) in the females. In two female patients the bleeding was not controlled conservatively, exploration and control of the bleeding was achieved under general anaesthesia. The bleeding was arterial in one case and was ligated, in the other case the bleeding was due to diffuse oozing from the tonsillar bed, this was controlled by packing, and she received two units of blood.

Regarding the total percentage of the post operative bleeding, it was 2.4%, with the children accounted for 0.7% and the adults 1.7%. Similarly, the percentage of the primary and secondary bleeding was at 1.7% and 0.7 respectively. Male to female ratio followed the same pattern at 1.7 for the females and 0.7 for the males (table1).

(Table 1) Percentages and type of bleeding, including male to female ratio, among the paediatric and adult groups.

Age	No. of pts	M:F	% of Hge	% of 1^{ry} Hge	% of 2^{ry} Hge
< 15	153 (60%)	1:1.3	1.5%	0%	100%
≥ 15	100 (40%)	1:2.1	4%	100%	0%

DISCUSSION

Although the post tonsillectomy haemorrhage is uncommon, it may lead to serious complications. Therefore, every consideration should be taken to prevent it. Once it happens it should be managed urgently. In general, post tonsillectomy haemorrhage occurs in fewer than 10% of cases[11], The reported incidence of haemorrahnge ranges from 0.38 to 6%[5,7,10].

In this study, the total rate of bleeding was 2.4%, it is comparable with that at Yamanda Red Cross Hospital in Japan (2.7%)[2], and with that at St Lukes Hospital in Matla (3.2%)[3]. Indication of surgery appears to be associated with age, adenotonsillectomy are being performed to treat upper air way obstruction caused by adenotonsillar hyperplasia, but in adult the primary indication is infection[10,11]. According to result of this study, chronic or recurrent infection likely to play a role in incidence of post operative bleeding, this is based on the facts that there was a significantly higher incidence of post tonsillectomy haemorrhage in adult as compared to children (4% vs 1.5%). This finding is in agreement with study of Robert et al[9] and Myssiorek et al[8]. It is noted that the rate of bleeding in adults (4%) and children (1.5%) was obviously different. The percentage was close to that conducted in Germany at Anna Lukes Hospital at 3.9% and 1.6%[6]. During post operative period of tonsillectomy several complications may occur and the haemorrhage is the most severe one[8]. Cause of haemorrhage is lack of visualization of vessels[4] which is not ligated or improper ligation, injuries to tonsillar bed during tonsillectomy[10]and improper check for bleeding lead to more bleeding during intraoperative period.

Most of the studies reported that primary haemorrhage is more common than secondary haemorrhage ,generally acknowledged to poor surgical and inadequate intraoperative haemostasis, is a risk factor for post tonsillectomy haemorrhage[8]. It is also observed in this study that primary haemorrhage (1.7%) is more common than secondary haemorrhage (7%) .

CONCLUSION AND RECOMMENDATION

To sum up, it is apparent from the study that incidence of post-operative bleeding following tonsillectomy increase with age .

Adults with chronic tonsillitis and poor surgical technique were most risk factor for post tonsillectomy haemorrhage. An awareness of these factors can help identify patients with potential bleeding post operatively and tonsillectomy can be safely carried out in a protocol technique. We recommended giving more attention to adult patients in terms of the experience of the surgeon.

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