

Assessment of Secondary Haemorrhage Following Tonsillectomy

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We determined the rate of secondary haemorrhage following tonsillectomy by performing a telephone interview with 60 consecutive patients from ages 12+ years and above undergoing tonsillectomy alone. We were able to contact all Patients in our study group and found that 40% of patients reported a significant episode of bleeding postoperatively following discharge. Many previous studies only considered readmission rates for secondary haemorrhage that are clearly much lower than this and highly variable. We would suggest that although secondary haemorrhage can occasionally be very serious, the majority is minor. It therefore would be more useful to consider numbers of patients returning to theatre than readmission rates when comparing different techniques for tonsillectomy.

Key words: Tonsillectomy, secondary haemorrhage

Tonsillectomy with or without adenoidectomy is one of the most frequently performed surgical procedures accounting for 40% of all operations performed in the United Kingdom by Otolaryngologists. The introduction of disposable instruments for tonsillectomy has been hampered by reported increases in secondary haemorrhage rates. Whilst the readmission rate for secondary haemorrhage is well documented there are only a few studies that have considered the rate of secondary haemorrhage occurring in the community.

Methods:

We conducted a telephone survey of 60 consecutive patients of 12 years and above undergoing tonsillectomy as a sole procedure between May and November 2000 between two and four months following surgery. We asked if they had any bleeding following discharge and if so had blood been actively flowing from their mouth for more than a few minutes. For those patients answering yes to both questions we then asked if they has sought advice from anyone, and if so whom.

Results:

Twenty-four (40%) patients reported a significant bleed 13(22%) attended their G.P, three (5%) asked friends or family for advice, 4(7%) attended Accident and Emergency and 4(7%) sought no advice. 5(8%) were readmitted, 2 via their G.P. and 3 via Accident and Emergency. Two (3%) returned to theatre for arrest of haemorrhage.

Discussion:

Defining that which represents a significant secondary tonsillar haemorrhage has been a long standing dilemma, and without such a standard it is difficult to assess difference in secondary haemorrhage rates. Carmody¹ considered a secondary bleed significant if controlling it required active measures, if a blood transfusion was required or if a patient was admitted for more than 48 hrs. Clearly this definition is subject to variations in individuals

practice and change in policies over time. Kuo² suggested significance was determined if more than a cup of blood was produced or if blood was expectorated for more than 24 hrs. Bailey³ defined any bleeding that required intervention after leaving the operating theatre. Twenty⁴ emphasized significant bleeding if the child spits more than a spoonful of fresh blood or vomits stale blood. Judkins⁵ included all patients with bleeding, even if episodic, if they were evaluated by an Otolaryngologist. With out definition of significant bleeding we tried to exclude the normal ooze one might expect from a tonsillar bed, but not miss any more significant bleed, although we accept that even the majority of these bleeds settled with no active management.

Table 1

Author	No. of Pts.	Readmission rates (%)	Return to theatre rate (%)
Khan	60	8.33	3.33
Blomgren ⁸	413	7.75	1.21
Chowdhury ¹¹	6842	1.118	0.09
Windfuhr ¹⁰	602	N/a	0.83
Kuo ²	149	2.68	0
Raut ⁷	200	9.50	0.50
Wei ¹²	4662	1.91	0.88
Lee ¹³	294	0.34	0.00
Haberman ¹⁴	500	6.40	1.80
Stage ¹⁵	833	1.80	0.60
Siodlak ¹⁶	511	2.94	00
Roberts ¹⁷	1090	1.93	0.00
Segal ¹⁸	211	2.84	1.90
Maniglia ¹⁹	1428	0.14	0.07
Watson ²⁰	1036	1.45	0.10
Kendrick ²¹	244	3.28	0.00

A number of previous studies have considered secondary haemorrhage rates in the community. Benson-Mitchell⁶ found that 4(16%) out of 25 children had had some bleeding when contacted at two weeks postoperatively. Raut⁷ found a 16.9% secondary haemorrhage rate in 200 patients assessing the patients between 15 and 17 days postoperatively. However they did not define a significant bleed and excluded patients who had previous quinsy. Blomgren⁸ found that 32.8% mixed adults and pardiatics

patients had some secondary post tonsillectomy haemorrhage. Ghafoor⁹ found a rate of secondary haemorrhage leading to early contact with a doctor of 26% in a mixed adult and child group surveyed at 14 days postoperatively. We feel that these studies validate our results as one would expect a higher rate in adults^{1,8} and our numbers of patients seeking medical attention is very similar to these other studies. It is interesting to note that Windfuhr¹⁰ reported a secondary haemorrhage rate of only 1% using a telephone survey of 602 patients 3 months post tonsillectomy. In this study patients were kept in hospital for a minimum of five days and no diathermy was used (table 1).

Trying to compare reported rates of secondary haemorrhage is hampered by marked international differences in the management of the complication. One suspects that readmission rates have more to do with local attitudes and protocols than a true reflection of variances in the complication rate. If the rates of return to theatre are considered in larger studies there is a closer correlation (return to theatre group: $r=0.56$, $p=0.02$; readmission group $r=0.35$, $p=0.12$) between authors (table 1). It may be that the need to return to theatre for control of haemorrhage represents the complications rate should use for future comparison of instruments and techniques. Secondary haemorrhage after tonsillectomy is a complication that is common, but can be life threatening. In the absence of any predictive factors regarding the severity of the bleed we must take a cautious approach in managing the problem. It is equally evident that many patients do not return to hospital despite episodes of active bleeding. We would therefore suggest that the rate of return to theatre for control of bleeding be used as a more reliable indicator of complication rates for audit and study purposes.

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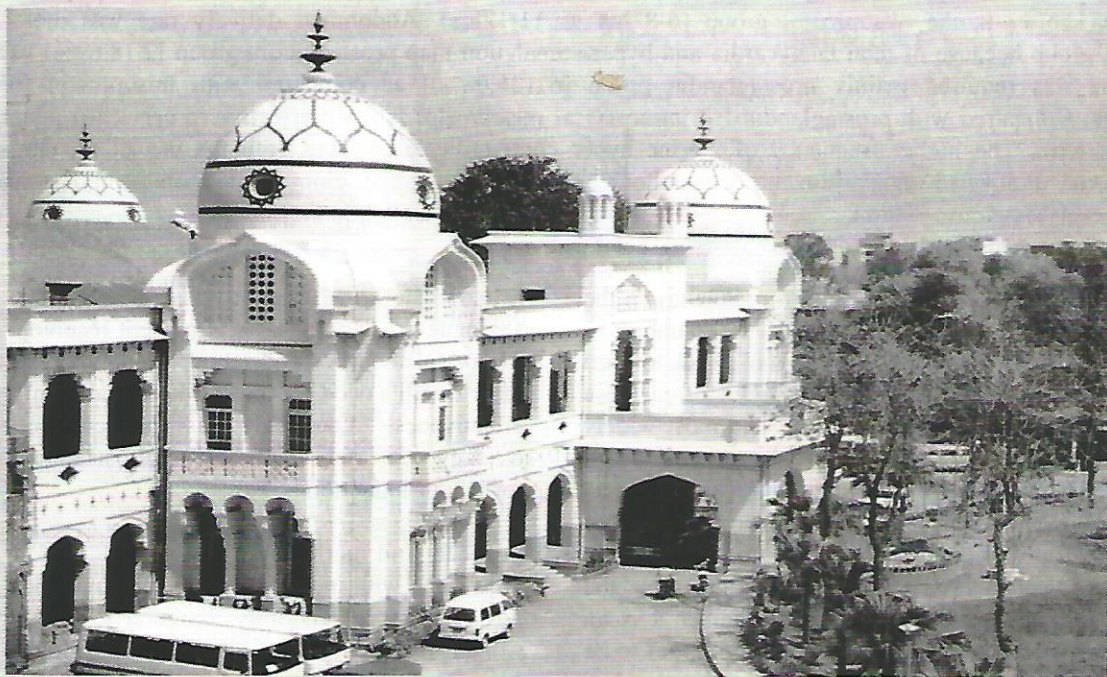
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