

# The Incidence and Management of Post-Tonsillectomy Hemorrhage

N ABBAS M AMJAD I HUSSAIN F P AKHTAR

Department of ENT Unit-II, Mayo Hospital, Lahore

Correspondence to. Dr Nasim Abbas, Senior Registrar,

This is a retrospective study of 350 cases of tonsillectomy for post-tonsillectomy hemorrhage. The incidence figure was found to be 1.14% i.e. 4 cases out of 350. Reactionary hemorrhage occurred in 2 patients and secondary hemorrhage was also found in 2 cases. Two patients having reactionary hemorrhage and one patient having secondary hemorrhage were treated by ligation and another patient having secondary hemorrhage was treated conservatively.

**Key words:** Tonsillectomy, hemorrhage

Tonsillectomy is the most frequently performed operation in ENT practice. In the United States approximately 750,000 adenotonsillectomies are performed annually<sup>1</sup>.

After tonsillectomy, hemorrhage is the most significant complication and most of the deaths associated with this operation are directly or indirectly associated with this complication<sup>2</sup>.

According to different studies, the incidence of post-tonsillectomy hemorrhage varies from zero to 20%<sup>3</sup>. The present study is a retrospective study of the incidence and management of post-tonsillectomy hemorrhage and comprises of 350 cases of tonsillectomy performed during one year in the Department of ENT, Mayo Hospital, Lahore.

## Patients and Methods

This study was carried out on 350 patients in whom tonsillectomy was done in the Department of ENT, Mayo Hospital, Lahore. The period of study was from 1<sup>st</sup> July, 1998 to 30<sup>th</sup> June, 1999. All the patients were admitted through outpatients department. Complete case histories, management and follow up were recorded in a detailed proforma. Each patient underwent a detailed examination of ear, nose, throat and general physical as well as systemic examination. Routine investigations included the complete blood count, hemoglobin estimation, bleeding and clotting time. All the tonsillectomies were performed by using the dissection method. Hemostasis was secured either by ligating the bleeding points with the help of catgut or by using coagulation diathermy. After the operation, all patients were given antibiotics and analgesics for 10-14 days. Most of the patients were discharged from hospital on the second post-operative day.

In the present study out of total 350 cases, 202(57.71%) were male and 148(42.28%) were female patients, while 210 patients (60%) were between 1-10 years age group, 110 (31.42%) were between 11-20 years, 25(7.14%) were between 21-30 years and 5(1.42%) were between 31-40 years. The age distribution is shown in Table-I.

Table I. Showing the age distribution of 350 patients.

Age Group (Years)	No. of Pts.	%age
1-10	210	60
11-20	110	31.42
21-30	25	7.14
31-40	5	1.42
Total	350	100

## Results

The incidence of post-tonsillectomy hemorrhage in this study was found to be 1.14% i.e. 4 cases out of 350 tonsillectomies. In the first two cases bleeding occurred within 6-8 hours after the operation. In both cases ligation of bleeding points was done under general anesthesia. The third case had profuse bleeding on the 7th postoperative day and in this case pillar ligation was done under general anesthesia. The fourth case had slight bleeding and was managed conservatively. Table-II shows a brief description of these four cases.

Table II. Showing a brief description of four cases having post-tonsillectomy hemorrhage.

Age (Years)	Sex	Time	Type	Management
9	M	Same day	Profuse	Ligation
11	M	Same day	Profuse	Ligation
23	F	7 <sup>th</sup> day	Profuse	Ligation
31	M	8 <sup>th</sup> day	Slight	Conservative

## Discussion

The incidence of post-tonsillectomy hemorrhage varies world-wide, for example 1% as reported by Carmody et al<sup>4</sup>, 2.5% by Choudhry et al<sup>5</sup>, and 12% by Siodlak et al<sup>6</sup> by using dissection method of tonsillectomy. We routinely use dissection method for performing tonsillectomy and the incidence figure in our series of 350 cases was found to be 1.14%. The incidence figure of 4% has been reported by using coagulation diathermy method<sup>3</sup>.

## Post Tonsillectomy Hemorrhage

Post-tonsillectomy hemorrhage is conventionally classified as reactionary and secondary. Reactionary hemorrhage is the most significant immediate complication of tonsillectomy. By definition this occurs up to 24 hours postoperatively but the vast majority of reactionary or primary hemorrhages occur within the first 8 hours and the most common cause is slippage of ligatures. Reactionary hemorrhage after tonsillectomy is unusual, occurring in about 0.5-1% of operations<sup>7</sup>. In the present study its incidence was found to be 0.57%. Secondary hemorrhage occurs more than 24 hours after surgery and classically occurs at 6-8 days. The most likely cause is tonsillar bed infection. Combination of antibiotic with antiseptic gargles and analgesics in the postoperative period is very effective in reducing the chances of secondary haemorrhage<sup>8</sup>.

In case of reactionary hemorrhage the patient should be shifted to operation theatre for ligation of bleeding point under general anesthesia. Secondary hemorrhage usually responds to conservative treatment consisting of antibiotic therapy and fresh blood transfusion, but sometimes suturing of the bleeding point becomes necessary. In both types of hemorrhage, blood should be cross-matched and blood transfusion may be needed if hemoglobin level falls below 10gm%. In the present study, two patients having reactionary hemorrhage required immediate ligation of

bleeding point under general anesthesia. One patient having secondary hemorrhage was treated conservatively while the second case having profuse bleeding was managed by doing pillar ligation under general anesthesia.

## References

1. Segal C, Berger J, Marshak G: Adenotonsillectomies on a surgical day clinic basis. *The Laryngoscope*, 1983; 93: 1205-8.
2. Scott Brown's Text Book of Otolaryngology, Vol.5, 6<sup>th</sup> Ed. 5/4/20, D.L. Cowan and John Hibbert.
3. Hussain A: Coagulation diathermy tonsillectomy. *Pak Journal of ORL*, 1991; 7: 81-5.
4. Carmody D, Vamadevan T, Cooper SM: Post-tonsillectomy haemorrhage. *The Journal of Laryngology and Otology*, 1982; 96: 636-8.
5. Choudhary K, Twefik TL, Schloss MD: Posttonsillectomy and adenoidectomy haemorrhage. *Journal fo ORL*, 1988; 17: 46-9.
6. Siodlak MZ, Gleeson MJ, Wengras CL: Post-tonsillectomy secondary haemorrhage. *Annals of the Royal college of Surgeons of England*, 1985; 67: 167-8.
7. Williams AJ (1967): Haemorrhage following tonsillectomy and adenoidectomy. *Journal of laryngology and otology* 81: 805-808.
8. Attalah, MS: Comparative study of post-tonsillectomy medications. *Pak Journal of ORL*, 1983;9: 136-9.