# POST ADENOTONSILLECTOMY BLEEDING

**Incidence:**

In a meta-analysis published in 2017, the frequency of primary and secondary post adenotonsillectomy bleed was <4% for any technique (4.2% for total tonsillectomy, and 1.5% for partial tonsillectomy). Four deaths were reported in case series including 1,778,342 children.

**Classification**:

a. Primary: Occurring within 24 hours, likely due to inadequate haemostasis
b. Secondary: Occurring after days to weeks peaking at day 5 to 7, likely due to sloughing of eschar or infection

**Risk factors:**

1. Chronic tonsillitis
2. Risk increases with age
3. Poor compliance to postoperative care

**Initial management:**

- Alert the ENT team
- History and initial observation and monitoring of haemodynamic variables in stable patients with mild bleeding
- Secure intravenous access and maintain IV fluids
- Use of Tranexamic acid: Nebulized Tranexamic acid has proven to be helpful in reducing post tonsillectomy haemorrhage. Consider use of IV Tranexamic acid
- Send investigations including CBC, PT/INR, fibrinogen, ,electrolytes, and blood sample for crossmatch. Platelet function assay is recommended if available.

- Use of antiemetics
- Surgical correction if bleeding is persistent or severe

**Anaesthesia Concerns:**

- Hypovolemia due to haemorrhage
- Full stomach and risk of pulmonary aspiration
- Airway obstruction from blood, potential difficult laryngoscopic view
- Anxious child/ parents
- Possible residual effects of anaesthetic/ analgesic medications

**Management:**

1. Preoperative assessment and management
    a. Assessment of volume status: Estimate the amount of blood loss and the degree of hypovolemia, ensure good venous access or use of ultrasound guided intravenous cannula placement if IV access proves difficult, resuscitate if necessary.
    b. Blood: In case of time limitation point of care haemoglobin measurement and arrangement of blood products and ensure availability of packed red cells.
    c. Review previous anaesthetic chart for ease of intubation, size of ETT used, anaesthetic agents used, history of sleep apnoea and post anaesthetic course.

2. Conduct of anaesthesia
    a. Preparation: Skilled anaesthetic assistance, two large bore suction devices, fluid warmers, emergency medications for cardiovascular collapse, and preparation for difficult airway with secondary airway equipment.

ETT: previously used size and 0.5 to 1 size smaller should be readily available, and nasal prongs for apnoeic oxygenation, Surgeon should be present inside the operating room.

b. Technique: Classic rapid sequence induction, inhalational induction, and rapid sequence induction with gentle bag mask ventilation are acceptable. Airway pressures to be kept <12cm $H_2O$. Dose and choice of induction agent depends on the preference/experience of anaesthetist in charge, airway assessment and volume status of the patient.

3. Following control of the airway, empty the stomach using a large bore nasogastric tube.

4. Extubate the patient once fully awake and in the lateral position.

5. Ensure adequate postoperative analgesia and anti-emesis.

*References:*


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