Airway Management in a Child Developing Laryngomalacia after SISTRUNK Surgery

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1. Case History

- A 2 year old male child presented with a swelling in front of neck since 5 months, gradually increasing in size, patient underwent surgery of incision and drainage for same under GA 6 months back where he was transfused with 1PRC, but patient again complained of watery discharge from the incision site
- Now patient was posted for thyroglossal cyst excision

Birth history
Not significant

O/e GC fair, pt was conscious, a febrile, alert with vitals—pulse 100/min BP—appwf, spo2 100%, airway examination showed no obvious craniofacial anomaly, and systemic examination was WNL

Investigations
CBC 9.4/10100/276000
RFT 14/0.5
SE 139/3.7
Pt was advised to keep adequate NBM, for the next day of surgery

VLSCOPE image showing left sided swelling near left vocal cord

After taking consent of parents, patient was taken on OT table, monitors were attached, vitals noted and IV fluid was started

After the procedure, and looking after spontaneous efforts of respiration of patient, pt was reversed with Inj neostigmine 0.06mg/kg IV, injglycopyrrolate 0.06mg/kg IV and patient was extubated.

Premedication were given with Injfentanyl 2mcg/kg, Injglycopyrrolate 0.06mg/kg and anesthesia was induced with Sevoflurane +O2 using muscle relax antunjatracurium

After extubation, patient developed stridor after 5 mins, chest retractions were present along with nasal flaring. SpO2 dropped to 86%, patient was re-intubated now with 4.5 mm ETube using videolaryngoscope

Using direct laryngoscope, Pt was then intubated with ET tube no 5 (uncuffed), with backline at level of cords, air entry was confirmed, rechecked after fixation, and anesthesia was maintained on O2–Air–Sevoflurane–intermittent injatracurium on closed circuit mechanical ventilation. Patient was vitally stable throughout the procedure

After monitoring for 1 hour, Pt was extubated, but again pt developed similar symptoms and therefore re-intubated with ET tube 4.5 using videolaryngoscope

Pt was shifted on O2bolus with ambu ventilation to ICU and was put on ventilator and decision to extubation was withheld for few hrs.
ICU Monitoring and Evaluation Bronchoscopy in ENTOT

After shifting to 1A, patient again developed chest retractions with RR of 54/min, pulse 180/min and patient was febrile with temperature of 38 degC. Decision was taken for patient to put On HFNC 15L O2/min, 60%FiO2. Patient tolerated HFNC and improved after 2hrs along with giving lateral and prone positioning intermittently, patient gradually weaned off wherein RR was 22/min, pulse 140/min with minimal chest retractions.

2. Case Discussion

Use of HFNC in this case proved a beneficial thing for this child, otherwise the child would have to be reintubated again and further complications would have occurred. Hence, ventilator associated infections were bypassed. In addition to that reintubation might have aggravated the child’s status.
References

[1] A rare complication of the Sistrunk’s procedure in thyroglossal duct remnant tracheal injury Erikci, Volkan; Hoşgör, Münevver