

SURGERY VERSUS ANAESTHESIA IN CLEFT LIP AND PALATE

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Introduction

In India, over 32,000¹ infants are born with cleft lip or palate every year. The risk factors are considered as

1. **Family history:** Cleft lip is more likely to be inherited than a cleft palate.
2. **Sex :** Male female ratios 2:1 for a cleft lip and 1:2 for a cleft palate²
3. Race as American Indian, Hispanic² are more prone

Key words : RAE tubes, cleft lip and palate

Aim

The purpose of this paper is to study the change in the number of repair surgeries and the type of anaesthetic equipment used for the cleft lips and palates during the period of July 2007 to March 2010

Material & Method

Since 2007 there is a marked increase in the number of cleft repair surgeries in my institution (12-15 cases per month). Operating room records are the source of data which includes age, sex, diagnosis and anaesthetic equipments i.e., type of endotracheal tube.

Patients are mostly children between the age group of three months to eight years. The repair for cleft lip is ideally done within three to six months of age and cleft palate, within eight to eighteen months of age. The surgical technique applied for repair of cleft lip is Millard's and for cleft palate, two flap technique based on greater palatine artery (island flap). Repair surgery for cleft lip and palate in the same patient is not done in one sitting.

Result

RAE (Ring, Adair, Elwyn) preformed tube³ for orotracheal intubation is ideal for cleft lip and palate surgeries. The preformed bend in the tube (south facing type) exits from the mouth so calculatively that the connector with the circuit passes down the chin away from the face giving ample space and access to the surgeon around the mouth, nose and head of the patient without hampering the airway. The red rubber Magill's endotracheal tube were used in some of the cases which had posed difficulty in maintaining its texture once draping of the surgical parts were done. Many a times the tube either gets kinked or dislodged and slipped out of the trachea in mid surgery of cleft lip or specially in palate reconstruction, where pharyngeal pack is avoided.

Though RAE tube has a disadvantage as its fixed intra-oral length³, it is always the choicest one as far as the safety

of the anaesthesiologist, uninterrupted operating field for the surgeon and the least risk for the patients' patent airway are concerned.

Discussion

Children are not small adults and paediatric anaesthesia in craniofacial abnormalities as cleft lip and palate, is a challenge for anaesthesiologists both anatomically and physiologically.⁴ So to control the airway by sharing it and the operating site with the surgeon, requires an anaesthesiologist who should be a skilled and knowledgeable one, even while preparing the anaesthetic drugs and equipments.

The part of India where my institute is, i.e., NorthEast India, the children of the low socio-economic status, predominantly the tribals are found to be affected the most. Reasons may be the inter-relation of genetic, environmental as habit of smoking or taking alcohol and nutritional factors as lack of folic acid &/or other vitamins and poor food habit.^{5,6}

Conclusion

So the increase in the number of patients for last four years in our Tripura Medical College, Agartala, is primarily because the surgeries are done free of cost to the patients under the banner of a NGO, secondarily the safe and improved anaesthetic technique as well as the skilled surgeons / anaesthesiologists and last but not the least, the advertisement done by those who had undergone the surgeries while they return to their villages⁷

References

1. en.wikipedia.org/wiki/Smile_Train
2. Mayo clinic.com. Study by Mayo clinic staff. Cleft lip and Cleft palate. April 2008
3. Wards Anaesthetic Equipment, Andrew J Savey & Ali Diva, fifth Edition, p-187
4. Encyclopedia.com. Anaesthesia for repair of cleft lip and palate. Journal of Perioperative Practice. January 1, 2009/Hardcastle, Teresa
5. PeerL, Walker JC Jr, Bernhard WG, Perk G.C. Study of 400 pregnancies, protective effect of Folic acid and Vitamin B6 therapy. Plastic Reconstructive Surg 1958; 22:442-9
6. Fraser G.R., Calnan JS. Cleft lip and palate: Seasonal incidence birth weight etc. Arch Dis Child 1961; 36(188):420-3
7. Doker P, Bankas Do, Agbenorku P et al. Cleft lip and palate surgery in Kamasu, Ghana: 2001-2005. J Craniofacial Surgery, 2007 Nov, 18(6): 1376-9



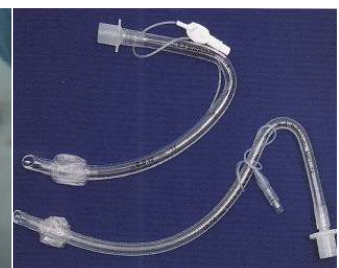
Post operative Cleft lip with the Magill endotracheal tube in situ



Pre operative Cleft lip and palate



Post operative Cleft lip of the same patient



RAE endotracheal tube south facing (upper) for oral intubation and north facing (lower) for nasal intubation