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Case Report

Case report on bilateral cleft palate with protuded premaxilla

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ABSTRACT

Cleft palate (ICD 10-Q 35.9) with Protruding of premaxilla is common feature in patient with bilateral cleft lip and palate it is due to the under trained growth at anterior nasal septal and vomero-premaxillary suture without lateral continuities. Hippocrates (400BC) AND Galen(150AD) mansion cleft lip, but not cleft palate in their writing, Cleft palate –Fanco.(1556), Repair of cleft lip –as early as 255-206 BC in CHINA. The first successful closure of a soft palate defect was reported in 1764 by LEMONNIER a French dentist.

1. Introduction

Cleft palate are congenital malformations resulting from the failure of fusion of maxillary processes during intrauterine development. Cleft palate are common birth defect in which a part of the lip and palate doesn't completely come together or close while the baby is developing in the womb and so a split or cleft is left is in that area. Sometimes they are part of syndrome of birth defects. Cleft palate occurs in female approximately in 1in 2500 birth.[1] This abnormality appears to run in families and therefore to be influence by hereditary, but no genetic factors may also be involved. Babies with the cleft lip/cleft palate need special care to ensure proper feeding and prevent complication. Surgery is done to close the cleft lip and cleft palate. Cleft lip is usually repaired by age 3 months, cleft palate by 1 years.[2]

2. Case Report

A 2 year 8 Month 27 days female child was admitted in hospital with known case of bilateral premaxilla in bilateral cleft lip palate, therefore baby was admitted for cleft palate surgery, there is no history of cough cold and fever. Bilateral cleft was operated 6 months back. During admission her family knew about the procedures / surgery. Her vitals were: Temperature 98^0, Respiratory rate is 26/ min Blood pressure 90/60 mm Hg Spo_2- 98% Central nervous system was conscious, oriented.

1. *Physical Problem:* I found that the child had difficulty in swallowing, speech problem according to her age group she only speak few word like mama, papa, yes and no, nasal sounding voice, hard and soft palate facial defect, dental problems like poor oral hygiene, halitosis.
2. *Psychological Problem:* child was anxious, low self-confidence, child presented temper tantrum, child was self-involved, and lack of interest in surrounding
3. *Psychological Problem:* Children with clefts may face social, emotional and behavioral problems due to differences in appearance and the stress of intensive medical care.

2.1. Operation procedure

1. Date of surgery 11/08/2021
2. Preoperative diagnosis: bilateral cleft palate with protruded premaxilla.

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3. Procedure performed: cleft palate repaired + vomerine setback
4. Post operative period — during the post-operative periods all vitals were monitored and was stable, there is no oozing, bleeding from suture site. And child had smooth recovery.

Table 1: Details of the patient

Biographic Data	**Patient**
Age	2 years 8 month
Sex	Female
Address	Manewada road Nagpur
IP No	NHN/201226003
Education	10^{th} class
Religion	Hindu
Date of admission	9/08/2021

2.2. *Definition*

Cleft plate result from failure of fusion of the hard with each other and with the soft plate. Cleft plate may be complete (Involving hard and soft plate, possibly including a gap in the palate) or incomplete (A hole in the roof of the mouth, usually in soft palate). palatoschisis

2.3. *Cleft lip plate are basically divided in two category*

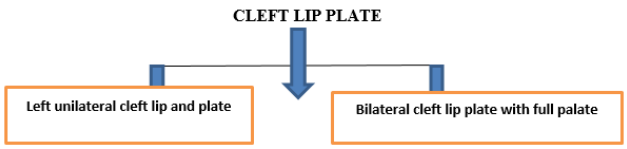

Fig. 1: Cleft lip plate

Book picture	**Patient picture**
Unilateral cleft lip and palate A cleft plate is a common birth defect which occurs in baby's lip and palate (roof of mouth) as result is split of side of the lip extended all the ways from nose to back of palate.	
Bilateral cleft lip and plate Bilateral cleft, where the cleft occurs in both sides of the lip and it is very least common type.	Protruding or rotating premaxilla with bilateral cleft lip and palate was seen in my client.

2.4. *Incidence*

The incidence rate of cleft lip plate is 1 in 2500 births. And it is predominantly seen in Female approximately 15 % of the affected infant have associated with this defect. Cleft palate are facial malformation that occurs in fetus very early in pregnancy, while the baby is developing inside mother's womb. In most Cassese, the cause is unknown. Most of the physician believe that cleft plate are occurs due to combination of genetic and environmental factors.

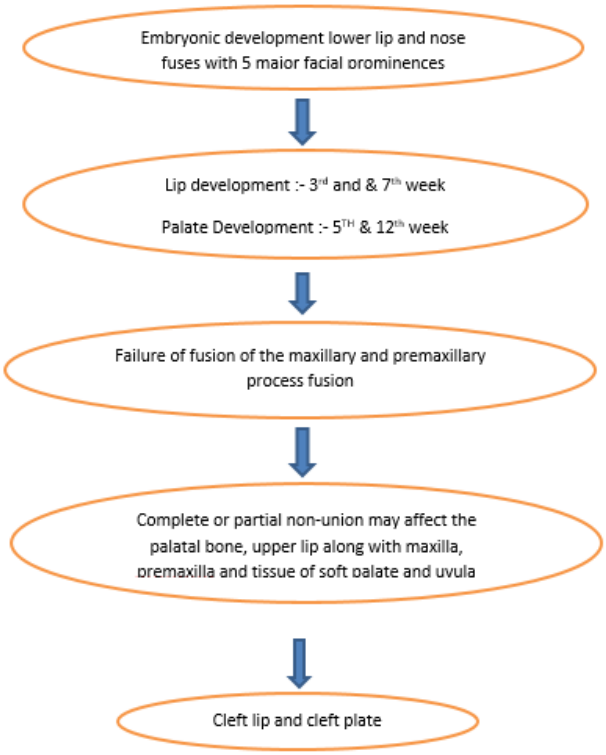

Fig. 2: Etiopathology

Table 2: Complication

Book Picture	**Patient Picture**
Feeding problem :- due to separation in the lip or opening in palate .	Difficulty in eating due to protruding premaxilla
Respiratory infection: aspiration of feeds may result in respiratory infection like pneumonia	
Ear infections/hearing loss: children with cleft palate are at an increased risk of ear infections.	
Speech problem: children with cleft lip or palate may have trouble in speaking	Child speaks few words and have difficulty in talking with others.
Dental problems: children with cleft are more prone to dental cavities.	Child has malformation of upper teeth, along with dental cavities.

Table 3: Diagnosis

Book Picture	Patient Picture
Maternal ultrasonography	
After birth physical examination – mouth, plate, nose confirms the presence of cleft	Physical examination done and it confirmed that the child was having bilateral cleft palate with protrude premaxilla.
Visual examination	Visual examination done with above diagnosis

Fig. 3: Image of disease condition

Table 4: Management

Book Picture	Patient Picture
Surgical Management	Client was operated for Bilateral cleft o before 6 month.
Repair often requires multiple surgeries over the course of 18 years.	The following surgical management was done
The 1^{st} surgical repair usually occurs when the baby is between 6-12 months	Cleft palate repair + Vomerine setback operative procedure was done.
Procedure	
	Under GA/AAP DONE Vomerine set back done
Children with cleft palate may need a bone graft when they are about 8 years old	Cleft palate repair done
20% of children with a cleft palate requires further surgery to help improve speech.	Gel from kep
Once the permanent teeth grow, braces may be put to straighten the teeth.	C and D done
Pharmocological management	Treatment given
Depending on the condition, pre and postoperatively,	IV fluids as per protocols
Antibiotics	Inj Taxim 500mg twice a dayx 3days
Antiemetics	Inj Metrogyl 100mg twice a day x 4days
Analgesics	Suppol suppository 170mg ($3/4^{th}$)thrice a dayx 3 days
Anticholinergics	Syp. Zincovit 5mlonce a day x 4 days
Antacids	Syp. Lbugesic 5ml thrice a day x4 days.

3. Discussion

Bilateral cleft palate with protruded premaxilla is a rare congenital anomaly, which occurs in fetus during developing in mother's womb. It is mostly found in female, in most cases, the cause is unknown. The chance of cleft in newborn is more, if a parent or sibling has had the problem. The problem can be identified after birth of baby. Surgical management is the only way to treat condition. The first surgical repair usually occurs when the baby is between 6-12 months. This initial surgery was done for functional closer of palate, therefore it will reduce the chance of fluid entering middle ear.[3]

The child was 2 year 8 Month old admitted in hospital with known case of bilateral premaxilla in bilateral cleft lip palate, therefore baby was admitted for cleft palate surgery, Bilateral cleft was operated 6 months back. During admission her family knew about the procedures, Child was operated Bilateral cleft palate with protruded premaxilla and Cleft palate repaired + Vomerine setback operative procedure was performed.

4. Conclusion

The baby was admitted with the above –mentioned complaints. Admitted for cleft palate surgery. Blood investigation before surgery suggestive of hb-9.7, pcv-30.8, TLC-12970, platelets- 3.97, CRP-1.96, creatinine-0.52. fitness for surgery was done by pediatrician. The baby shifted OT for bilateral cleft palate surgery on 11/08/2021. The child underwent the procedure under GA and post –op, shifted to PICU for recovery. All vitals monitored and child had a smooth recovery.[4] once oral feeds were established, child was shifted to wards same treatment continued in the wards. Ward stay was uneventful. There is no oozing, bleeding from suture site. Wound is healthy. At the time of discharge child is active, afebrile, accepting orally well, hemodynamically stable, passing urine and stool normally.

Child was ask to come to follow up after 15 days.[5,6]

5. Source of Funding

None.

6. Conflict of Interest

None.

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