NCCU CLINICAL GUIDELINES
SECTION: 13

SURGICAL CONDITIONS

CLEFT LIP AND/OR PALATE

Cleft lip and palate results from failure of normal orofacial development in weeks 6 to 12 of embryonic life. The incidence is 1**:**1000 Caucasian births and higher in Asian populations. It is more common in males and can be associated with other anomalies.
All infants born with a cleft lip and palate should be assessed within the first 48 to 72 hours of life.

The aim of treatment is to:

- Promote normal facial appearance with the assistance of pre-surgical orthopaedic treatment. Infants will be assessed and if required fitted with a plate and bonnet and strapping. Surgical repair of the lip occurs at approximately 3 months and repair of the palate at 9 months.
- Educate parents to specific care requirements of the plate, strapping and feeding to ensure optimal growth and development
- Admission is usually 4 to 5 days and parents should be resident with the infant for that time.

TRANSFER
Contact the Cleft Clinic Coordinator on 9340 8573 and Ward 6B (9340 8448) regarding plan for transfer. Assessment of the cleft will only be made Monday to Friday. Admission is to educate parents about specific care of the infant so infants can generally stay with their mother at referring hospital over the weekend or until the mother is well enough to accompany the infant, usually at 24 to 48 hours of age.
If the infant has a cleft lip only and is feeding well and gaining weight, it may not need to be transferred, but the Cleft Co-ordinator must still be notified (9340 8573) to organise assessment and follow up.

Notify the Cleft Coordinator on admission to 6B to enable coordination of the Cleft Team: Plastic Surgeon, Dentist and CleftPals support group (at parents' request).

EDUCATION (Videos)

"Cleft Lip & Palate Nursing Care Plan"

"*Fitting Bonnet and Strapping for Cleft Lip and Palate infants – Dental Demonstration"*

"Spoon feeding for Cleft Lip and Palate infants" (Parents will be required to spoon feed infants prior to lip repair at ~ 3 months)

EQUIPMENT

- Order pigeon (squeezy) bottles from Infant formula Room.
- Laryngoscope
- Paper cups
- Chlorhexidine gel
- Soft white paraffin gel
- Plastic medicine spoon
- Boiled water (kept by patient bedside, replenished every 24 hrs)
- Shortened buffered swab sticks
- Polident

FEEDING

Infants with cleft lip and or palate are routinely fed with a pigeon (squeezy) bottle with a short fast teat as they are generally unable to create an adequate seal to feed with a normal bottle or “strip” the breast with the tongue against the hard palate whilst beast feeding.

- When feeding, the bottle is gently squeezed as the baby sucks. Squeezing ceases when the infant is not sucking.
- Infants should be fed in a straight sitting position to prevent the risk of aspiration. If a baby is fed in a lying, cradled position milk may pool in the oral cavity and aspiration may occur.
- Milk needs to be warmed to body temperature to reduce the incidence of vasovagal episodes from cold milk entering the nasal cavity. Warming the milk also softens the bottle making it easier to squeeze.
- As infants with clefts do not maintain a good seal, they tend to swallow a lot of air with the feed and therefore require winding at the middle and end of the feed.
- Feeds should take approximately 30 minutes; extended feeds limit the baby’s ability to rest. Feeds should be given 3 to 4 hourly to demand.
- Breast feeding, although difficult, may be possible for infants with clefts, especially after a good milk supply has been established. Mothers should be encouraged to express breast milk. Expressed milk can be given via pigeon bottle. Please discuss with the Lactation consultant on 6B after admission.
- Mouth care should be given after each feed see below.

NGT feeding is not generally required; infants should be encouraged to suck all their feeds. If NGT feeding is required the NGT should be inserted into the unaffected nare. When placed in the clefted side, the tube can migrate between the nasal and oral cavity, causing possible erosion to the mucosa.

Dummies are discouraged as they can cause further erosion of the cleft and cannot be used in the post operative phase as it puts strain on the suture and interferes with the healing process.

ORTHOPAEDIC APPLIANCE (FOR CLEFT PALATE)

The orthopaedic appliances (OA), dental plate, facilitates moulding of oral structures. It acts as an obturator and assists with feeding by creating a false palate. It also prevents the tongue from migrating into the cleft and protects from further erosion due to activity of the tongue. The dentist will take an impression with alginate for an OA if considered necessary. The nurse assists ensuring oxygen and suction, with a yanker sucker, and forceps are available. The mouth must be visualised after the impression and suctioned to ensure no alginate remains as this may be a choking hazard.
Creation of the plate takes 12 to 24 hours and then is fitted by the dentist. Daily assessment by the dentist ensures a good fit and assesses areas of the OA causing ulceration in the mouth.
Using an OA creates less room in the oral cavity, which can make initial feeding more difficult.
The OA remains insitu at all times apart from routine mouth care and cleaning.

ROUTINE MOUTH CARE

1. Performed after each feed for the first 48hrs once the OA is fitted. Performed BD thereafter.
2. Remove the OA and wash in cooled boiled water.
3. Give the infant sufficient room temperature boiled water by teaspoon to effectively rinse the mouth and keep the mouth relatively curd free, usually 1 teaspoon. **Vaso-vagal reaction if cold water is used.**
4. Remove the OA from the water and apply chlorhexidine gel to it, TDS for the first 48hrs, and BD thereafter.
5. The mouth should be inspected for any new areas of ulceration, bleeding and tooth eruption, using the laryngoscope. OA may need to be adjusted by the Dentist.
6. Using moist shortened buffered swab sticks clean under the flattened nare.
7. Carefully insert the OA slightly sideward for a unilateral cleft and straight for a bilateral cleft. A thin smear of polident to the side gum areas of the plate can be used if required.
8. Apply soft white paraffin to all lip areas and the premaxilla prn and at each feed time.
9. Mouth care is not required for isolated clefts and for PRS.

BONNET AND STRAPPING

- Commences **ONLY AFTER** the insertion of the OA. Strapping consists of a piece of soft elastic fitted individually to the infant. It should sit on the protruding maxilla and cover the cleft, but it must rest on skin and never on oral mucosa.
- Pressure areas can occur if the strapping is too tight and be ineffective if the strapping is too loose.
- Bonnets should be tied snugly at the side, checked frequently and tightened when necessary.
- The cheeks should bulge over either side of the elastic. The position should be checked frequently by staff and parents.
- Each infant should be individually fitted for 3 bonnets. They are taken home and replaced in the dental clinic as required.
- Bonnets are washed at bath time and dried at the cot side.
- Strapping is kept insitu at all times other than feeding and bathing.

Unilateral Cleft:
Start strapping from the non-cleft side, and pull over the cleft; fix with Velcro tabs.
Bilateral Cleft:
The strapping is placed on the pre-maxilla and should cover the width of the cleft and the tabs are affixed to both sides of bonnet in one motion.

Documentation: Feeding amount and duration, condition of mouth and oral cavity, parent education, visit by CleftPals, review by plastics and dentist.

PRIOR TO DISCHARGE

- Infants must have been seen by the Cleft Clinic Coordinator, Plastic Surgeon and Dentist.
- If the parents have not been reviewed by a geneticist, an appointment will be arranged for them as an outpatient by the Cleft Clinic Coordinator.
- Dental Clinic will obtain consent and organise for photographs of the infant's cleft for patient records.
- Parents must be competent in feeding and mouth care. The infant should be feeding well and gaining weight.
- Equipment: Parents are given 3 bonnets of appropriate size, pack containing swabs, chlorhexidine gel and elastic. Pigeon bottles must be purchased from Dental department or ClefPals Association.
- Appointments for Dental and Plastic's follow up are made by the Cleft Palate Coordinator.

PARENT SUPPORT

CleftPals is an organisation of parents who support families of children with cleft lip and palate. They are available for hospital visits and to give advice over the phone. They also provide supplies such as pigeon bottles at a reduced cost. At parents' request CleftPals can be contacted through the cleft coordinator or further information obtained on line at www.cleftpalswa.org.au

REFERENCES

David, D, Smith,I, Nugent,M, Richards,C, Anderson,P. 2011 A group of patients who have completed their protocol management bilateral cleft lip, cleft palate. Journal Paediatric Reconstructive Surgery. 128 (2) 475-485.

Kenner,C, Wright, J. 2003 Comprehensive Neonatal Nursing 3rd Edition Saunders, London. P 459-460.