CLEFT LIP AND/OR PALATE REPAIR: MANAGEMENT AND CARE - CHW

PRACTICE GUIDELINE ©

DOCUMENT SUMMARY/KEY POINTS

- Close observation and monitoring of patients following cleft lip and palate surgery is essential.
- Nasopharyngeal tubes are often used for airway management of patients following cleft palate surgery. Please refer to, Flowchart for the care of a child with a nasopharyngeal tube insitu, link which may be found within the policy.
- Each surgeon has variations in the post-operative care of their patients. Please refer to the post-operative care reference table link within the policy for post-operative guidelines.
- Parental education prior to discharge is essential

Approved by:	SCHN Policy, Procedure & Guideline Committee	Original endorsed by SMG 2005
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CHANGE SUMMARY

- Due for mandatory review – no major changes.

READ ACKNOWLEDGEMENT

- Nursing staff caring for patients following cleft lip/palate surgical procedures should read and acknowledge this document.

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1 Introduction

Reconstructive surgery for clefts occurs in stages. Repair of the cleft lip and nose is usually performed between 3 and 6 months of age. Clefts of the hard and soft palate are repaired between 6 and18 months of age. Older children may present for submucosal cleft palate repair, palate lengthening, pharyngoplasty and repair of palatal fistul and alveolar bone grafting procedures.

2 Pre-Operative Care

Prior to surgery many patients will have attended a pre- admission clinic where they have been given an overview of the post-operative care by the Cleft Palate Clinical Nurse Consultant

- Parents are frequently advised to introduce a feeding spout prior to hospitalisation. The feeding spout is given to the parents in PATS clinic or Cleft Palate Clinic by the Clinical Nurse Consultant. Breast feeding is allowed in most cases where mothers have been managing to breastfeed at home2.
- Blood is frequently taken for Group and Hold prior to cleft surgery.

3 Post-Operative Care

Please refer to the post-operative care reference table for guidelines on postoperative feeding and lip cares.

- **Postoperative Care Reference Table**:
  http://chw.schn.health.nsw.gov.au/ou/cleft/resources/references/post-operative_care_reference_table.pdf

3.1 Monitoring

Following a cleft lip and nose repair, nursing staff perform and record temperature, pulse and respiration (TPR) and oxygen saturations on return to the ward. Thereafter, hourly TPRs are required for 4 hours and then, if satisfactory, 4th hourly TPR.

Following cleft palate repair nursing staff perform and record TPR and oxygen saturations on return to the ward. Thereafter, hourly TPRs are required for 4 hours. Hourly pulse, respirations and continuous pulse oximetry is then continued for 24 hours. Temperature measurements are performed 4th hourly.

A nasopharyngeal tube may be required to maintain an airway following cleft surgery.

- Hourly pulse, respirations and continuous pulse oximetry are required until the nasopharyngeal airway is removed. These patients should be **closely monitored** by nursing staff while there is a nasopharyngeal tube in situ. These patients have a potential for airway obstruction due to post-operative swelling and so a nurse should be in the room to monitor for signs of respiratory distress.

- Once the nasopharyngeal tube is removed observations may be recorded 4/24 if stable. If the child displays any sign of respiratory distress pulse oximetry and close observation by nursing staff should continue and nursing staff should notify the appropriate medical team and arrange for clinical review of the patient.

Following pharyngeal flap and pharyngoplasty surgery children are at risk of developing Obstructive Sleep Apnoea (OSA). It is important for nursing staff to observe these children while they are asleep for snoring and signs of respiratory distress.

If at any time the patients observations fall outside the parameters of the " Between the flags" observations chart then nursing staff should contact the appropriate medical team and arrange for clinical review of the patient.

The head of the bed should be elevated to a 45 degree angle to allow for adequate chest expansion and airway maintenance[3].

The lip and palate are vascular areas and postoperative care includes monitoring the operative sites for bleeding, excessive swallowing may be a sign of bleeding and swallowing blood[4].

Nursing staff should contact the plastic surgery team if they have any concerns regarding the volume of blood loss experienced by a patient.

Nasopharyngeal Tubes

Hourly suctioning of the nasopharyngeal tube is required to ensure tube patency. More frequent suctioning may be required in the immediate post-operative period. If the tube is dislodged the plastics and anaesthetic registrars should be contacted immediately. The nasopharyngeal tube should not be reinserted without consultation with the anaesthetic and plastics registrars.

Please refer to this link to view the pathway followed when a child has a nasopharyngeal tube insitu:

- Flowchart for the Care of a Child with a Nasopharyngeal Tube Insitu: http://chw.schn.health.nsw.gov.au/ou/cleft/resources/references/guidelines_for_care_of_the_NPT.pdf

Equipment required at patient's bedside:

- suction outlet and oxygen outlet
- suction trolley
- mouth care equipment
- saturation monitoring
- soft suction catheter (for oral suctioning) with suction pack
- Y suction Catheter
- Normal Saline (5mL ampoules) and 1mL syringes (for NP Tubes)
- sterile gloves
- protective goggles
- Water for irrigation
- bag for rubbish

Oral Suctioning

After cleft lip or palate surgery, the patient often has blood stained nasal discharge and blood stained oral secretions. Oral suctioning may be required to assist with these secretions. Any oral suctioning should be performed as gently as possible and should be directed towards the sides of the mouth[5].

A soft tipped suction catheter should always be used for oral suctioning.

4 Pain Management

For post-operative pain management guidelines please refer to the CHW Pain Management Practice Guideline: http://chw.schn.health.nsw.gov.au/o/documents/policies/guidelines/2006-8215.pdf

Regular oral analgesia will be necessary for several days post operatively after the initial opioid infusion has been ceased. Pain relief may be required half an hour before bottles or meals to provide analgesia and optimise the infant's ability to feed.

5 Fluid Maintenance and Nutrition

Post operatively the patient will have intravenous therapy until they are tolerating oral feeds.

Following cleft surgery the child should not start oral fluids until they are fully awake following the anaesthetic, bleeding has stopped and there are minimal secretions from the nasopharyngeal tube.

If a nasopharyngeal tube is in situ the child is allowed oral fluids such as formula, unless the surgeon or anaesthetist has stipulated otherwise. Intake of solids may commence once the nasopharyngeal tube has been removed.

Feeding can proceed using the method approved by their surgeon outlined in the post-operative care reference table

Many infants will be unable to use their regular teat and squeeze bottle and will be introduced to a NUK spout. Many babies will find this change difficult in their feeding routine and so staff will need to assist and support parents in establishing feeds post-operatively. Breast feeding is suitable where infants are already breast feeding at home.

Following cleft palate surgery children will need to adhere to a diet of smooth textured food for several weeks. Older children may eat a "Cleft palate, older child" diet option in the Patient Management System. A soft diet is not appropriate following cleft palate, palate lengthening, pharyngoplasty or alveolar bone grafting procedures.

Following surgery these children should not eat firm textured foods which could damage the newly repaired palate[6].

6 Wound Care

6.1 Suture Line (Lips)

Following a cleft lip repair dummies, metal spoons, plastic drinking straws and toys should not be allowed near the child's face. When eating solids a smooth edged plastic or rubber coated spoon should be used i.e. Heinz Baby Starter Spoon. Squeeze bottles with a NUK feeding spout are appropriate for use.

If dissolvable sutures and Histoacryl glue have been used then the lip suture line does not require cleaning. The surgical glue placed over the dissolvable sutures, acts as a protective barrier.

If non dissolvable sutures are used then the suture line will need to be cleaned. Care of the suture line is essential because inflammation or infection of the suture line will interfere with optimal healing[7]. The wound is cleaned by gently rolling a cotton bud, moistened with Normal Saline over the suture line followed by application of Chloromycetin ointment. The lip wound is cleaned 4 times a day and this should be performed after feeding, and as necessary in between feeds. Carefully remove all dried blood, milk and crusts from the suture line including the upper lip.

Equipment Required for Cleaning the Lip Suture Line

- Normal saline ampoules
- Chloromycetin ointment.
- Sterile cotton buds.
- Bag for rubbish.

Following alveolar bone grafting children will have a wound on the iliac crest where bone was harvested. This wound will have dissolving sutures and will be covered by a dry dressing. Before discharge nursing staff should apply a waterproof dressing such as a Tegaderm so that the patient is able to have a shower and keep the wound dry.

Removal of Sutures

Sutures are removed 7 days following the primary lip repair. This procedure is performed as a day surgery case.

Nasal Splints

Nasal splint are frequently inserted following the primary cleft lip and nose repair. These splints are worn by the infant for 3 to 4 months following surgery.

Koken splints are glued in situ using Histoacryl surgical glue while the temporary silicone nasal splints are held in place with sutures. When the lip sutures are removed the initial silicon splint is removed and another silicone splint is fitted. This second splint can be removed as required for cleaning by the parents and is taped insitu using Hypafix.

7 Oral hygiene following cleft surgery

Oral hygiene is important following all cleft surgery. All oral sutures are dissolving but mouth-care is essential to promote wound healing.

After consumption of formula or food water is used to cleanse the suture line of any food particles and coating of milk[9].

Infants and young children are given 5-10mL of water to drink after each feed and where possible, depending upon the age of the child, rinse their mouth with water. Older children who have had repair of their palate fistula, pharyngoplasty or alveolar bone grafting can rinse their mouth with water followed by the use a mouthwash after meals to maintain oral hygiene.

8 Arm Splints

Following surgery the child may be required to wear arm splints. These splints should be released frequently to exercise the arms, to provide relief from restriction and to observe the skin for signs of irritation[10]. The arm splints are worn whenever the child is not supervised by a parent or staff member and should be released at least every 4 hours. Nursing staff should demonstrate the application of the splints to the parents and assist the parents until they are confident removing and reapplying the splints. The splints are worn for 2 to 3 weeks following the surgery.

9 Parent Education

- Encourage parents to be involved in all aspects of their child's care for example lip care, mouth washes, arm splinting, feeding etc so that they are confident in caring for their child upon discharge from hospital
- Parents should be given the appropriate written post-operative care information sheets before discharge
- Please use the links below for the appropriate Discharge Information Sheet to be given to parents and patients:
    - **Cleft Lip Discharge Information Sheet**: http://chw.schn.health.nsw.gov.au/ou/cleft/resources/references/post-operative_care_for_cleft_lip_repair.pdf
    - **Cleft Lip as Day Surgery Information Sheet**: http://chw.schn.health.nsw.gov.au/ou/cleft/resources/references/cleft_lip_repair_-_day_stay_instructions.pdf
    - **Cleft Palate Repair Discharge Information Sheet**: http://chw.schn.health.nsw.gov.au/ou/cleft/resources/references/cleft_palate_discharge_information_for_parents.pdf

- **Pharyngoplasty Discharge Information Sheet**: http://chw.schn.health.nsw.gov.au/ou/cleft/resources/references/pharyngeal_flap_-_palate_lengthening_-_pharyngoplasty_postoperative_care.pdf
- **Bone Graft Discharge Information Sheet**: http://chw.schn.health.nsw.gov.au/ou/cleft/resources/references/alveolar_bone_graft_discharge_information.pdf

NB: Each surgeon has variations in the preferred postoperative care. It is important to follow the post-operative instructions for each surgeon and patient. If unsure of the current practice please contact the Cleft Lip and Palate Nurse Consultant on Page 6758.

10 References

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