HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER MATERNITY AND CHILDREN HOSPITAL

Department:	Pediatrics		
Document:	Multidisciplinary Policy and Procedure		
Title:	Care of Patient with Croup or Laryngotracheobronchitis		
Applies To:	All Pediatric Staff		
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1. PURPOSE:

1.1 To maintain airway and provide adequate respiratory exchange.
1.2 To improve breathing pattern.
1.3 To promote adequate rest and maintain good hydration.

2. DEFINITIONS:

2.1 **Laryngotracheobronchitis (LTB)/Croup** – is actually a group of upper airway inflammatory diseases. The three 'classifications' of croup are Laryngotracheitis, spasmodic croup and LTB. Croup is a viral infection that causes inflammation (swelling) of the larynx, trachea and bronchus and the area around them. Common viral pathogens are parainfluenza, RSV and adenovirus. Croup is characterised by a barking or crowing cough. The patient most likely has exhibited the symptoms of the common cold. The patient may be afebrile or febrile. Initially, there is generally a mild, brassy cough with intermittent inspiratory stridor. As disease progresses, stridor becomes continuous, cough worsens, retractions and nasal flaring become apparent. Obstruction may extend to the bronchi and bronchioles, expiration becomes prolonged and labored and signs of respiratory distress increase, including dyspnea. Symptoms are usually worse in the evening or at night.

3. POLICY:

3.1 The nurse should assess the patient's airway and respiratory function frequently. Oxygen therapy must be initiated to maintain respiratory function.
3.2 Vital signs are to be assessed frequently for worsening of symptoms.
3.3 Intubation equipment should be readily accessible at the bedside.
3.4 Standard precautions must be observed at all times.

4. PROCEDURE:

4.1 Perform hand hygiene to prevent transmission of infection.
4.2 Assess patient for sign and symptoms of respiratory distress to initiate immediate measures as needed. Have minimal examination, minimize patient's anxiety and prevent from crying and agitation, which can increase stridor, respiratory distress and work of breathing.
- 4.2.1 Pattern of respiration:
  - 4.2.1.1 Inspect the rate, depth and ease of respirations
  - 4.2.1.2 Rapid rate of respirations (tachypnea)
- 4.2.2 Presence and severity of retractions and nasal flaring.
- 4.2.3 Breath sounds.
  - 4.2.3.1 Inspiratory stridor (a high pitched, musical sound that is created by narrowing of the airway)
- 4.2.4 Cough or cry.
  - 4.2.4.1 Brassy (noisy, musical)

4.2.4.2 Croupy (barking, seal – like)

4.2.5 Color:

4.2.5.1 Observe overall color

4.2.5.2 Compare peripheral and central color

4.2.5.3 Assess capillary refill and nail bed colour and inspect mucous membranes.

4.2.6 Mental status:

4.2.6.1 Note level of consciousness: alert or lethargic; lethargy may indicate hypoxia. Restlessness and irritability are associated with hypoxia.

4.2.6.2 Watch for abrupt behaviour changes; restlessness, irritability and lowered level of consciousness may indicate increasing hypoxia.

4.3 Connect patient to cardio respiratory monitor for close observation.

4.4 Keep patient NPO in severe respiratory distress in order to prevent aspiration.

4.5 Maintain patency of airway and provide adequate respiratory exchange.

4.5.1 Administer oxygen as needed and as ordered.

4.5.1.1 Administer cool humidified oxygen head box for infants and by mist to toddlers in order to provide increase humidity. Cool temperature therapy assist by constricting edematous blood vessels.

4.5.1.2 Administer humidified oxygen.

4.5.2 Suction as needed to prevent airway obstruction.

4.5.3 Assist the physician in endotracheal intubation when necessary if severe airway edema have occurred.

4.6 Provide measures to improve ventilation of the affected portion of the lung.

4.6.1 Allow the child to assume a comfortable position.

4.6.2 Provide postural drainage if prescribed.

4.7 Collect blood samples for CBC, electrolytes, culture and sensitivity tests, ABG samples to check the degree of infection and the organisms responsible and to determine the degree of hypoxia.

4.8 Administer epinephrine nebulization and corticosteroid as ordered because alpha adrenergic effects cause mucosal vasoconstriction and subsequent decreased sub glottis edema. The use of corticosteroid is beneficial because of its anti-inflammatory effect.

4.9 Administer antibiotics as ordered. Bacteremia is present in most patients; therefore antibiotic therapy should be instituted. Observed for drug sensitivity and patient's response to therapy.

4.10 Obtain lateral neck X – ray as ordered to rule out sub glottis edema and epiglottis.

4.11 Observe the patient continuously for inability to swallow, absence of voice sounds, increasing degree of respiratory distress and acute onset of drooling (an ominous sign of supraglottic obstruction).

4.12 Provide adequate hydration and nourishment.

4.12.1 Administer intravenous fluid as ordered to maintain hydration and prevent fluid overload.

4.12.2 Offer the patient sips of clear liquid when respiratory status improves as ordered by the doctor. Do not force the patient to take fluid orally; this may cause increased distress and possible vomiting and abdominal distension.

4.12.3 Assist in the control of fever by applying cold compress, bath and giving antipyretics as prescribed to reduce respiratory rate and fluid loss.

4.13 Record intake and output to determine hydration status.

4.14 Include the parents in the plan of care in the preparation for discharge

4.15 Document in the nurse's note all nursing care rendered, all treatment given, patient's condition and tolerance to procedure.

5. MATERIAL AND EQUIPMENT:

5.1 Cardio – Respiratory Monitor

5.2 Oxygen Supply

5.3 Oxygen Mask

5.4 Crash Cart

5.5 IV Insertion Set

5.6 IV Fluid

5.7 Laboratory Tubes for Investigation
5.8 X – Ray
5.9 Medications as Indicated

6. RESPONSIBILITIES:

6.1 Physician
6.2 Nurses
6.3 Radiologist

7. APPENDICES:

N/A

8. REFERENCES:

8.1 Ministry of Health, General Directorate of Nursing, Manual of Nursing Policy and Procedure, 2013
8.2 Janice L Hinkle, Kerry Cheever, Brunner and Siddhartha's Textbook of Medical Surgical Nursing, Lippincott Williams and Wilkins, Philadelphia, 13th edition, 2014.
8.3 Audrey Berman, Shirlee Snyder, Kozier and Erb's Fundamentals of Nursing Concept, Process and Practice, Pearson Education, 10th edition, 2015.

9. APPROVALS:

	Name	Title	Signature	Date
Prepared by:	Ms. May Oweid Alrawaily	Pedia Medical Ward Head Nurse		January 12, 2025
Prepared by:	Dr. Ibrahim Aliyu	Pediatric Quality Coordinator		January 12, 2025
Reviewed by:	Mr. Sabah Turayhib Al Harbi	Director of Nursing		January 13, 2025
Reviewed by:	Dr. Fahad Obaid Al Shammari	Pedia. Head of the Department		January 13, 2025
Reviewed by:	Mr. Abdulelah Ayed Al Mutairi	QM&PS Director		January 15, 2025
Reviewed by:	Dr. Tamer Mohamed Naguib	Medical Director		January 15, 2025
Approved by:	Mr. Fahad Hazam Al Shammari	Hospital Director		January 26, 2025