Medications

D5 ½ NS w/ 20 mEq KCl @ 65 ml/hr
Pharmacologic class: Carbohydrate
Therapeutic class: Glucose- elevating agent
Assess patients' blood glucose and electrolyte levels prior to administration

Albuterol 2.5 mg/ 3mL Neb q2h, q1h PRN
Pharmacologic class: Adrenergic
Therapeutic class: Bronchodilators
Assess lung sounds(wheezing), shortness of breath, blood pressure, and heart rate prior to administration

Prednisolone 23 mg (2mg/kg/day) PO BID (Available: 15 mg/5mL)
Pharmacologic class: Glucocorticoid
Therapeutic class: Immunosuppressant
Assess blood glucose, CBC, and electrolytes prior to administration

Acetaminophen 320 mg PO q6h
PRN pain, fever >101
Pharmacologic class: Non salicylate
Therapeutic class: Antipyretic
Assess for pain and fever prior to administration

Ibuprofen 200 mg PO q8h
PRN pain, fever> 101

Pharmacologic class: NSAID

Therapeutic class: Analgesic
Assess for pain and fever prior to administration

Demographic Data

Name: E. S. **Admitting diagnosis: Status Asthmaticus**

Psychosocial Developmental Stage: Initiative vs Guilt

Age of client: 6 years 4 months **Sex: Male**

Weight in kgs: 22.9 kg

Cognitive Development Stage: Preoperational Stage

Allergies: PCN- rash; strawberries - rash

Admission History

The patient is a 6 year, 4 -month -old male who was brought to an outlying ER today by his mother. Mother states that pt has been having some "difficulty breathing, wheezing and shortness of breath". Mother has administered home medications of albuterol nebulizer every 4 hours for the last 24 hours with little to no relief in the patient's symptoms. Pt started c/o chest pain this afternoon and mother brought him to the ER due to those symptoms.

Medical History

Previous Medical History: Reactive Airway Disease; hx RSV, bronchiolitis; Pt was hospitalized in 2016 for RSV and again in 2017 for reactive airway disease. Pt was born at 35 weeks with a 2 week stay in the NICU.

Prior Hospitalizations: myringotomy – 2016 (outpatient)

Chronic Medical Issues: Asthma

Social needs: N/A

Pathophysiology

Disease process: Asthma involves many pathophysiologic factors, including bronchiolar inflammation with airway constriction and resistance that manifests as episodes of coughing, shortness of breath, and wheezing (Capriotti, T., & Frizzell, 2020) These symptoms are what brought the patient in to the emergency room. Asthma can affect the trachea, bronchi, and bronchioles. Inflammation can exist even though obvious signs and symptoms of asthma may not always occur. Bronchospasms, edema, excessive mucus, and epithelial and muscle damage can lead to bronchoconstriction with bronchospasm (Capriotti, T., & Frizzell, 2020).

Defined as sharp contractions of bronchial smooth muscle, bronchospasm causes the airways to narrow; edema from microvascular leakage contributes to airway narrowing. Airway capillaries may dilate and leak, increasing secretions, which in turn causes edema and impairs mucus clearance (Capriotti, T., & Frizzell, 2020).

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S/S of disease: coughing, chest tightness, wheezing, and dyspnea- signs and symptoms worsen at night

Method of Diagnosis: Diagnosis may require pulmonary function tests (PFTs) and peak expiratory flow (PEF) measurements. Or Bronchial challenge

Treatment of disease: Corticosteroids and Bronchodilators

Relevant Lab Values/Diagnostics

The patients pO2 is 59.6. Normal pO2 is greater than 80. This number is a reflection of what the patient is experiencing- impaired gas exchange. Ventilation-perfusion inequality causes hypoxemia.

The patients HCO3 level is 18.3. Normal is 22- 26. The patient may be dehydrated- hence the reason he was started on fluids.

Seg 40-60 is normal, pts is 64- may be caused by inflammation in the pts body which may corelated to asthma symptoms or previous dx (reactive airway disease)

Lymphocytes 20-40, pt is 16.3- the pt may have previously used corticosteroids for his asthma. Usage of corticosteroids can lower the lymphocyte count

Eosinophils are usually 1-4 but his is 9.1- the pt may have an infection which may be correlated to asthma symptoms

CXR performed *** – negative for infiltrates, positive for hyperinflation-

Active Orders

D/C continuous neb treatment.

Albuterol 2.5 mg q2h via neb, q1h PRN shortness of breath, wheezing

D/C CBC, CMP for today

Clear liquid diet – advance as tolerated

Assessment										
General	**Integument**	**HEENT**	**Cardiovascular**	**Respiratory**	**Genitourinary**	**Gastrointestinal**	**Musculoskeletal**	**Neurological**	**Most recent VS (highlight if abnormal)**	**Pain and Pain Scale Used**
A&O X 4 The patient appears distressed. The patient is well-groomed.	Skin color is normal for race. Skin is intact, warm, and dry. Rapid rebound skin turgor, no open wounds.	Head is normocephalic, trachea midline. PERRLA. Septum midline, turbinates are pink and moist. Good dentition	Cardiovascular S1, S2 noted. Carotid, radial, brachial, ulnar on the right and left felt; posterior tibial, and dorsalis pedis pulses 2+ bilaterally. Capillary refill is less than 3 seconds.	Lung sounds are diffusely decreased breath sounds bilaterally. Diffuse expiratory wheezes, particularly evident with forced expiration. Use of accessory muscles	Normal findings	The patient's bowel sounds are normoactive in all four quadrants. The abdomen is soft, no masses or pain reported. The patient is on a clear liquid diet.	The patient has a full range of motion on 4 of 4 extremities, strong grips/pushes/pulls.	The patient is oriented x 4 The patient is on a clear liquid diet which will be advanced as tolerated.	**Time:1000** **Temperature: 98.2 F** **Route: oral** **RR:22** **HR: 96 bpm** **BP and MAP: 98/60** **Oxygen saturation: 93%** **Oxygen needs: 3L NC**	Pain 2/10 – Faces scale – chest tightness – distraction used

Nursing Diagnosis 1 Ineffective airway clearance related to airway spasm, secretion retention, amount of mucus as evidenced by wheezing.	Nursing Diagnosis 2 Ineffective breathing pattern related to swelling and spasm of the bronchial tubes as evidenced by shortness of breath.	Nursing Diagnosis 3 Impaired gas exchange related to altered delivery of inspired O2 as evidenced by decreased O2 saturations.
Rationale **Due to the patient not being able to affectively clear the airway, mucus will build up in the lungs and the pt will have a wheezing sound when breathing.**	**Rationale** **Due to the patients abnormal breathing pattern, the patient will be short of breath.**	**Rationale** **Due to impaired gas exchange the patients O2 saturations are decreased**
Interventions **Intervention 1:** Assess the effectiveness of cough. **Intervention 2:** Assess for color changes in the buccal mucosa, lips, and nail beds.	**Interventions** **Intervention 1:** Assess the client's vital signs as needed while in distress. **Intervention 2:** Assess the respiratory rate, depth, and rhythm.	**Interventions** **Intervention 1:** Position the patient upright if tolerated. Regularly check the patient's position to prevent sliding down in bed. **Intervention 2:** Give medications as prescribed, such as antibiotics, mucolytic agents, bronchodilators, and corticosteroids noting effectiveness and side effects.
Evaluation of Interventions **1. The patient will cough as demonstrated** **2. The patient's buccal mucosa, lips, and nail bed will be a normal color**	**Evaluation of Interventions** **1. The clients' vital signs will be normal** **2. The client's respiratory rate, depth, and rhythm will be normal.**	**Evaluation of Interventions** **1. The patient's position is maintained** **2. The pt will start breathing better dur=e to the prescribed meds.**

References (3):

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Capriotti, T., & Frizzell, J. (2020). *Pathophysiology: Introductory concepts and clinical perspectives.* (1st ed.). F.A. Davis Company.

Jones & Bartlett Learning, LLC. (2021). *2021 Nurse's drug handbook*. 2021 *Nurse's drug handbook (20th ed.)*. Jones & Bartlett Learning.

Swearingen, P. L., & Wright, J. (2018). *All-in-one nursing care planning resource: Medical-surgical, pediatric, maternity, and psychiatric-mental health* (5th ed.). Mosby.