

CASE REPORT ON STATUS ASTHMATICUS



Mrs. V. Suganya
*Asso. Prof.,
 Dept. of Paediatrics Nursing
 Narayana College of Nursing,
 Nellore.*

Mr. Naveen Kumar. M.R,
*Aruna College of Nursing,
 Tumkur.*

Mrs. M. Radhika,
M.Sc(N), Nellore.

Abstract: Asthma is the common health problem among children which require hospital admission for intensive treatment. Asthma is an inflammatory disease with edema, bronchial constriction, and mucous plugging. It can be dangerous and life threatening. Its prevalence, morbidity, and mortality have been increasing. It is also very challenging when presenting with acute asthmatic exacerbation (status asthmaticus). These children require aggressive treatment with b-agonists, anticholinergics, and corticosteroids. Endotracheal intubation with mechanical ventilation, is also needed.

Key words: asthma, status asthmaticus, mechanical ventilation, b blockers.

Introduction:

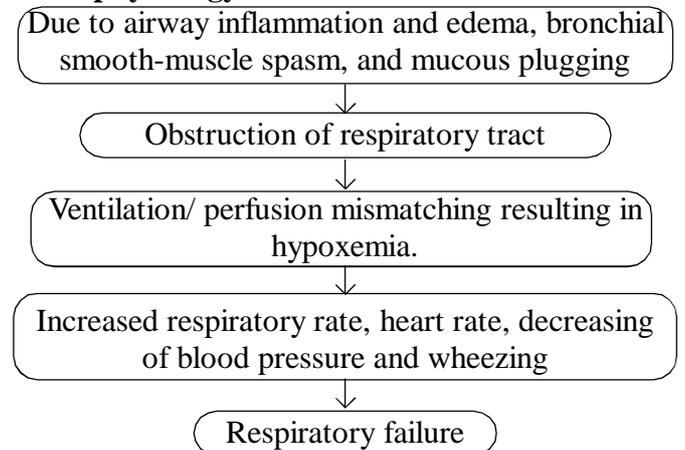
Children with acute asthma exacerbation are frequently admitted in an emergency department with signs of respiratory distress. Over 9% of children with asthma had made at least one visit to the emergency department with asthma exacerbations and it accounted for 3% to 7% of all paediatric emergency department visits. More than 50% of children who are admitted to the emergency department with an asthma exacerbation are preschool age (<5 years). The most common triggers for asthma exacerbations in both younger and older children are viral respiratory tract infections and exposure to allergens.

Characteristics: A male baby was born at 38 weeks of gestation with the birth weight of 3.2 kgs. There is no family history of bronchial asthma. The child had a history of dust and smoke allergy from the past. At the age of eight years, the child developed the signs and symptoms of respiratory distress with increased respiratory rate. The symptoms were worsening after 4 days and the child was brought to the emergency department. On examination, there was fever, respiratory distress and chest retraction. A chest examination shows bilateral wheezing with increase

respiratory rate with the use of accessory muscle. Investigations performed include: Hb of 12.5 gm/dl, Complete blood count of 24700 cells/ cumm, Neutrophils 77%, lymphocytes 14%, eosinophils 03%, monocytes 06%, ESR 36 mm/hr. The child was treated with O₂ 3 liters, Inj. Augmentin, Inj. Hydrocortison 100 mg and Nebulization with Budecort and Ipratent. On the 3rd day, there was a clear response to treatment and O₂ requirement was decreased.

Discussion:

Pathophysiology:



Management:

- ❖ Assess the child's respiratory distress to classify the severity.
- ❖ Focus on physical examination to estimate the functional severity of obstruction.

- ❖ Spirometry Usage
- ❖ O₂ administration
- ❖ Corticosteroid therapy
- ❖ B blockers

NURSING MANAGEMENT:

The possible nursing diagnosis and relevant interventions are discussed below.

1. Ineffective airway clearance related to mucus obstruction and broncho spasm.

Goal: Maintain the patent airway.

Nursing interventions:

INTERVENTION	RATIONALE
Assess the respiratory function: breath sounds, depth and accessory muscles.	Wheezing indicate the presence of excessive secretion.
Provide deep breathing and coughing exercise.	Loosen the secretion.
Provide chest physiotherapy.	Loosen the secretion.
Provide postural drainage.	Remove the secretion.
Administer nebulization.	To loosen and remove the secretion.
Provide broncho dilators.	Increase the bronchial diameter.
Administer O ₂ ,	To increase the O ₂ supply.

2. Impaired gas exchange related to hypoventilation

Goal: Maintain normal arterial blood gas

Intervention:

INTERVENTION	RATIONALE
Assess the respiratory function: breath sound, depth and accessory muscles.	Wheezing indicate the presence of excessive secretion and respiratory obstruction
Monitor the vital signs.	Early detection of severe cases by assessing drop of BP, increased heart rate and respiratory failure.
Administer O ₂	To increase the O ₂ supply
Suction patient as needed	Remove secretion from airway
Monitor ABG's if necessary	To assess the respiratory failure

Conclusion:

Asthma is a common inflammatory disorder of airway with hyper responsiveness. Status asthmaticus is defined as uncontrolled asthmetic symptoms with aggressive treatment and is one of the major problems in emergency admission. The common causes of status asthmaticus during childhood are viral infection and exposure to allergens. The child must be ruled out for specific allergic reaction. It helps prevent the exposure to allergens that reduces the prevalence of asthmatic episodes.

Reference:

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