

ACTIVE LEARNING TEMPLATE: *System Disorder*

STUDENT NAME _____

DISORDER/DISEASE PROCESS Asthma

REVIEW MODULE CHAPTER _____

Alterations in Health (Diagnosis)

Asthma

Pathophysiology Related to Client Problem

Inflammation (lymphocyte directed eosinophilic bronchitis) of the airway wall with increased thick mucus production that occlude the airway with bronchial hyperresponsiveness

Health Promotion and Disease Prevention

Avoidance of the trigger factors (Allergen avoidance)

ASSESSMENT

Risk Factors

Exposure to allergen, Family disposition, Obesity, Emotional factors e.g. stress; prenatal factors (prematurity and increased maternal age; maternal smoking and prenatal exposure to tobacco smoke), viral respiratory infections in children

Expected Findings

Wheezing, coughing, shortness of breath, chest tightness/pain.
Infants/Young children-
History of recurrent bronchitis, bronchiolitis, or pneumonia; a [persistent cough with colds; and/or recurrent croup or chest rattling

Laboratory Tests

Allergic testing
Nitric oxide test
Sputum eosinophil
Provocative testing for exercise and cold-induced asthma

Diagnostic Procedures

Establishment of episodic symptoms of airflow obstruction are present, airflow obstruction or symptoms are at least partially reversible, and exclusion of alternative diagnoses
Spirometry with postbronchodilator response
Exercise spirometry for exercise-induced bronchoconstriction
Pulse oximetry to exclude hypoxemia
Chest radiography

SAFETY CONSIDERATIONS

Avoid exposure to trigger factors such as strong odor, cold air, and pollutants
Use of medic alert bracelets
Always being in possession of antihistamine injections or inhalers
Prevent symptoms, minimize morbidity from acute episodes, and prevent functional and psychological morbidity to provide a healthy (or near healthy) lifestyle appropriate to the age of the child

PATIENT-CENTERED CARE

Nursing Care

Administration of medication
Patient education
Preparation of patient for diagnostic and therapeutic procedures
Assistance in multidisciplinary care in ICU settings

Medications

1) Bronchodilators
Beta adrenergic receptor agonists
Theophylline
Muscarinic antagonists
2) Anti-inflammatory agents
Glucocorticoids
Anti-leukotriene agents
3) Anti-allergic agents
Stabilizer of inflammatory cell membranes/Mast cell stabilizers
Anti-IgE therapy

Client Education

Instruct on the correct use of inhalers
Advice on steps to take following sudden onset of an asthmatic attack
Everything there is to know about the disease
The need for establishment of a partnership between patient and clinician in the management of the disease

Therapeutic Procedures

Bronchial thermoplasty

Interprofessional Care

Multidisciplinary management of the condition

Complications

Permanent lung damage and problems
Pneumonia
Collapse of part or all of the lungs
Respiratory failure
Status asthmaticus
Death