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S

Does the pt have episodic dyspnea, cough, wheezing, and/or chest tightness?

These are classic symptoms of asthma and are often worse at night or in the early morning.

Characterized by reversibility of symptoms following bronchodilator therapy.

How often do symptoms occur? Do they occur at night?

This will help classify the severity of chronic asthma (Table 2).

How often is the pt admitted to the ER for asthma? Has the pt been intubated?

This will also give some idea of the severity of the pt's asthma.

Does the pt have exposure to possible triggers of asthma?

- Exercise
- Cigarette smoke
- Sulfates
- NSAIDs
- Sinusitis
- Aspiration
- Nitrates
- GERD
- Smog
- Allergens

O

Conduct a PE and ABG to classify the severity of the current asthma exacerbation (Table 3)

Order a chest x-ray

Although you may see only hyperinflation, bronchial wall thickening, and peripheral lung shadows, you may also be able to rule out pneumonia and pneumothorax.

A

Asthma

Inflammatory disease of the lung characterized by reversible airway obstruction

Classify the asthma severity as mild intermittent, mild persistent, moderate persistent, or severe persistent.

Also note whether the pt's asthma is stable on this visit or whether the pt is having an exacerbation.

Differential diagnosis

- Foreign body aspiration
- Chronic bronchitis
- Bronchiectasis
- Tracheal stenosis
- Bronchiolitis obliterans
- Allergic bronchopulmonary aspergillosis
- Cystic fibrosis
- Churg-Strauss syndrome

P

If the pt is not currently having an asthma exacerbation, or if it is mild, prescribe the appropriate medications based on the severity of the asthma

Mild Intermittent: Albuterol as needed

Mild Persistent: Add a low-dose inhaled corticosteroid twice daily.

Moderate Persistent: Increase the dose of corticosteroids to medium or add a long-acting β_2 agonist. A leukotriene antagonist or theophylline may substitute for the long-acting β_2 agonist daily.

Table 2 Asthma Classification

Category	Symptoms	Nighttime Symptoms
Mild intermittent	$\leq 2 \times$ /week	$\leq 2 \times$ /month
Mild persistent	$> 2 \times$ /week, but $< 1 \times$ /day	$> 2 \times$ /month
Moderate persistent	Daily symptoms	$> 1 \times$ /week
Severe persistent	Continual symptoms	Frequent

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Table 3 Asthma Exacerbation

	Mild	Moderate	Severe	Impending Resp. Failure
Speech	Sentences	Phrases	Words	Mute
Body position	Can be supine	Prefers sitting	Unable to be supine	Unable to be supine
Respiratory rate	Normal	Increased	> 30/min	> 30 min
Breath sounds	Mod. wheezes late expiration	Loud wheezes through expiration	Loud insp. exp. wheezes	Little air movement
Heart rate	< 100 bpm	100–120	> 120	Relatively slow
Mental status	May be agitated	Agitated	Agitated	Drowsy
Peak Expirtory Flow (% predicted)	> 80	50–80	< 50	< 50
SaO_2 (% room air)	> 95	91–95	< 91	< 91
PaO_2 (mm Hg, room air)	Normal	> 60	< 60	< 60
$PaCO_2$ (mm Hg)	< 42	< 42	≥ 42	≥ 42

Severe Persistent: High-dose inhaled corticosteroids and a long-acting β_2 agonist twice daily. Add oral corticosteroids as needed. Attempts should be made to reduce corticosteroid dosages at every visit during which symptoms are well controlled.

Admit pts with evidence of moderate to severe asthma exacerbation to the hospital

Frequent high-dose delivery of inhaled short-acting β_2 agonists, either as metered-dose inhaler or as nebulizer, with at least three doses in the first hr.

Systemic corticosteroids and mucolytics should also be given to these pts.

Intubate those pts with severe asthma with poor or slow response to treatment and start mechanical ventilation

Further management should ensure adequate oxygenation, avoidance of barotrauma, and hypotension.

Administer inhaled short-acting β_2 agonists and systemic anti-inflammatory medications frequently.

Discharge when

Hypoxia and all other signs of respiratory distress are resolved.

Prescribe a dose of oral prednisone tapered from 60 mg po qd over the next 5 days

Consider outpatient pulmonary function testing when asymptomatic to document severity of disease and response to bronchodilator.

This will also help rule out COPD.