

Management of Chronic Asthma

History

- Symptoms (cough, wheeze, SOB)
- Onset, duration, frequency and severity
- Activity and nocturnal exacerbation
- Previous therapy
- Triggers
- Other atopies
- Family history
- Environmental history, SMOKING
- Systemic review

يا تميمير بجال وتطلع الذخائر
مع خشمتك ولا تقدر
معنا تفشلت...

حكيوت

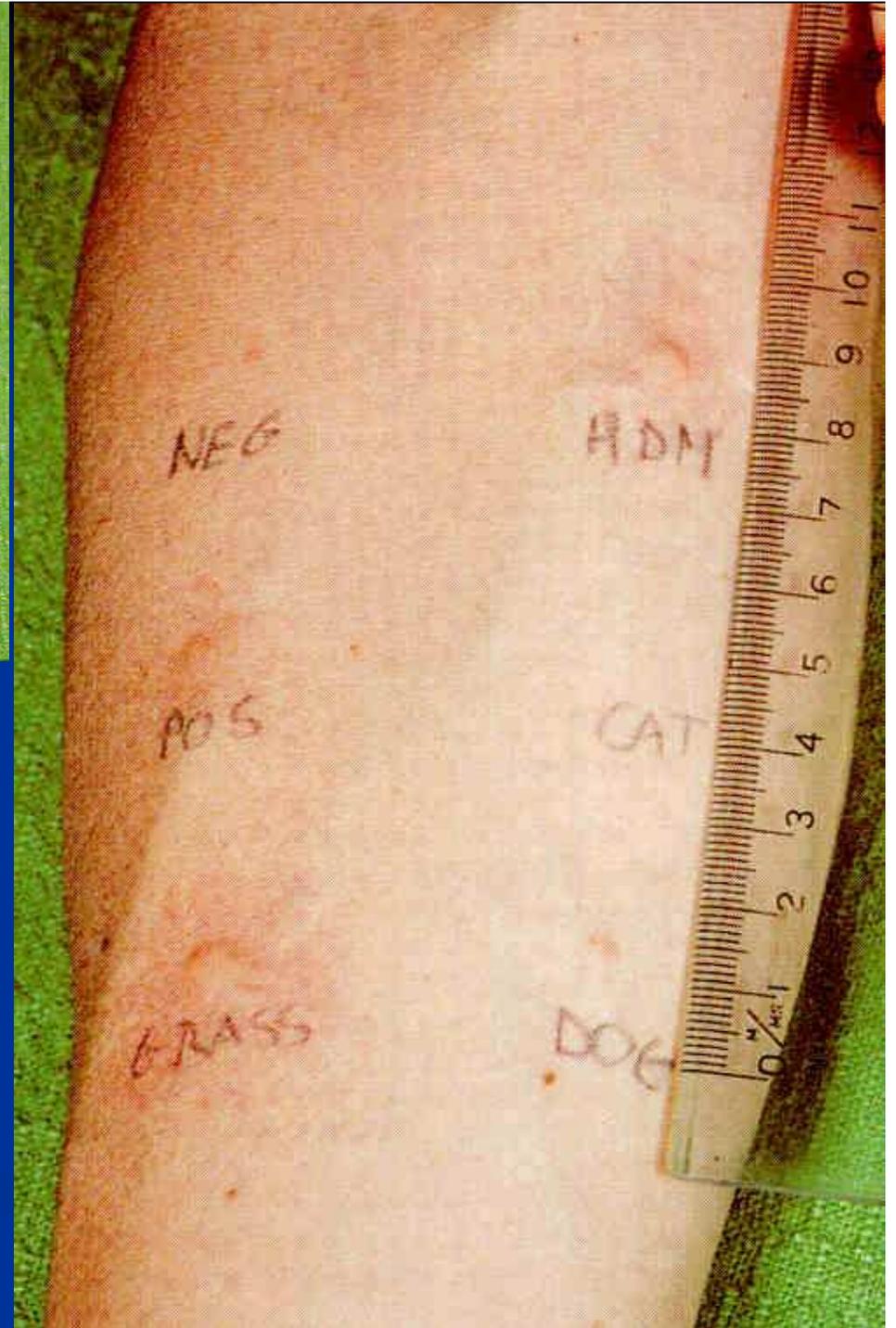


Physical Examination

- Growth parameter
- ENT
- Features of atopy
- Chest findings
- PEF

Investigations

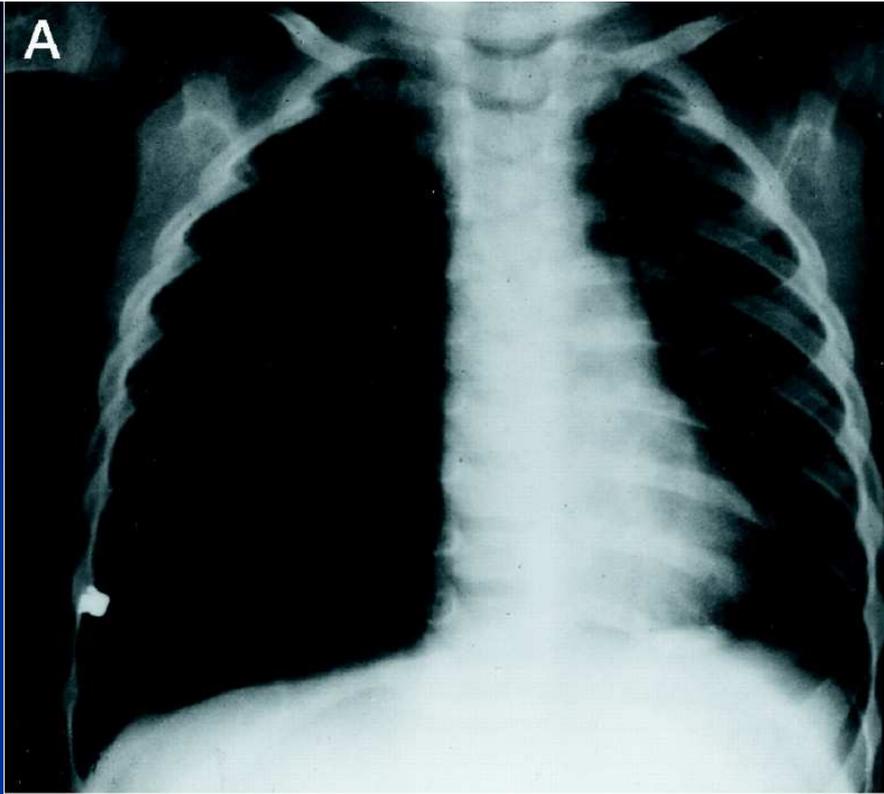
- Pulmonary Function Test
- Chest X ray in some.
- Allergy testing in some



Skin Testing

Differential Diagnosis

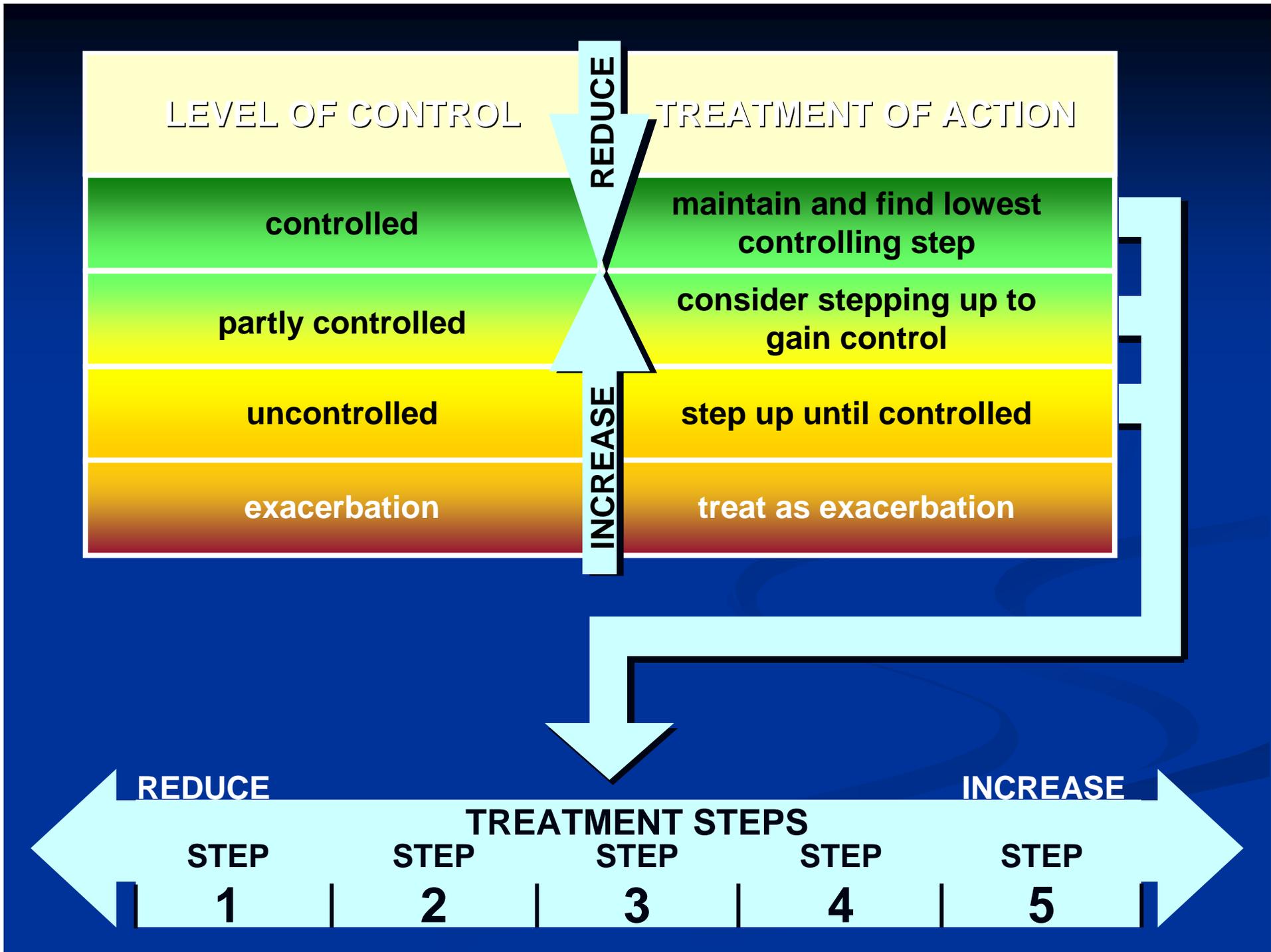
- Infections
- Congenital Heart Disease
- Foreign body
- GER
- Bronchopulmonary dysplasia
- Structural anomalies





Levels of Asthma Control

<i>Characteristic</i>	Controlled (All of the following)	Partly controlled (Any present in any week)	Uncontrolled	
Daytime symptoms	None (2 or less / week)	More than twice / week	3 or more features of partly controlled asthma present in any week	
Limitations of activities	None	Any		
Nocturnal symptoms / awakening	None	Any		
Need for rescue / "reliever" treatment	None (2 or less / week)	More than twice / week		
Lung function (PEF or FEV₁)	Normal	< 80% predicted or personal best (if known) on any day		
Exacerbation	None	One or more / year		1 in any week



		TREATMENT STEPS				
		REDUCE				INCREASE
		STEP 1	STEP 2	STEP 3	STEP 4	STEP 5
		asthma education				
		environmental control				
		as needed rapid-acting β_2 -agonist	as needed rapid-acting β_2 -agonist			
CONTROLLER OPTIONS			SELECT ONE	SELECT ONE	ADD ONE OR MORE	ADD ONE OR BOTH
		low-dose ICS*	low-dose ICS <i>plus</i> long-acting β_2 -agonist	medium- <i>or</i> high-dose ICS <i>plus</i> long-acting β_2 -agonist	oral glucocorticosteroid (lowest dose)	
		leukotriene modifier**	medium- <i>or</i> high-dose ICS	leukotriene modifier	anti-IgE treatment	
			low-dose ICS <i>plus</i> leukotriene modifier	sustained-release theophylline		
			low-dose ICS <i>plus</i> sustained-release theophylline			

*inhaled glucocorticosteroids

** receptor antagonist or synthesis inhibitors



Treatment objectives

- Achieve and maintain control of symptoms
- Maintain normal activity levels, including exercise
- Maintain pulmonary function as close to normal levels as possible
- Prevent asthma exacerbations

Treatment strategy

1. Develop Patient/Doctor Partnership
2. Identify and Reduce Exposure to Risk Factors
3. Assess, Treat and Monitor Asthma
4. Manage Asthma Exacerbations
5. Special Consideration

Pharmacological therapy

■ Relievers

- Inhaled fast-acting β_2 -agonists
- Inhaled anticholinergics

■ Controllers

- Inhaled corticosteroids
- Inhaled long-acting β_2 -agonists
- Inhaled cromones
- Oral anti-leukotrienes
- Oral theophyllines
- Oral corticosteroids

Why don't patients comply with treatment?

Intentional

- Feel better
- Fear of side effects
- Don't notice any benefit
- Fear of addiction
- Fear of being seen as an invalid
- Too complex regimen
- Can't afford medication

Unintentional

- Forget treatment
- Misunderstand regimen / lack information
- Unable to use their inhaler
- Run out of medication

Cromolyn Sodium

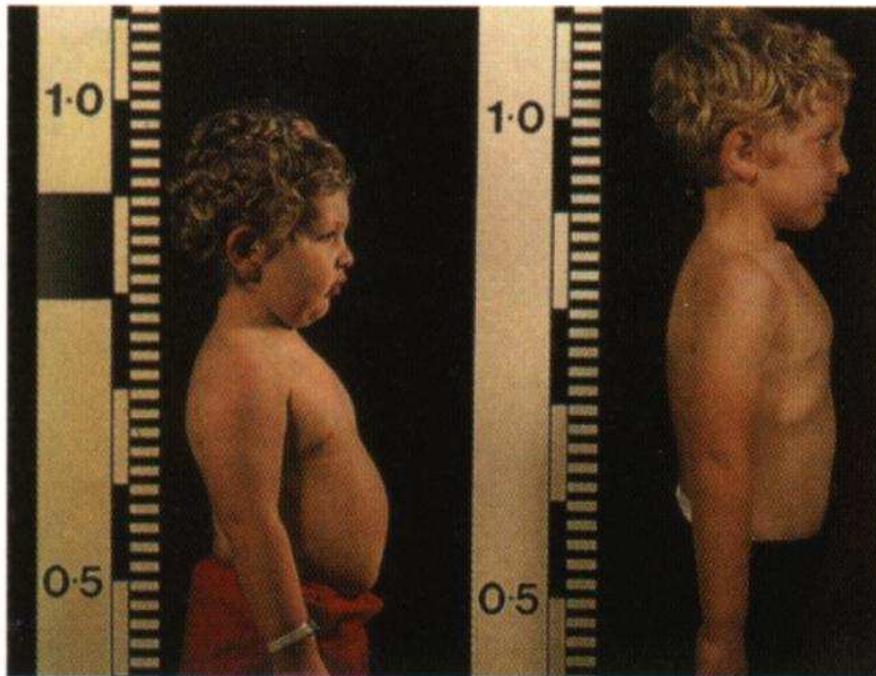
- Non-steroidal anti-inflammatory
- Weak action on Early and late phases
- Slow onset of action
- If no response in 6 weeks change to ICS
- Side effects: Irritation

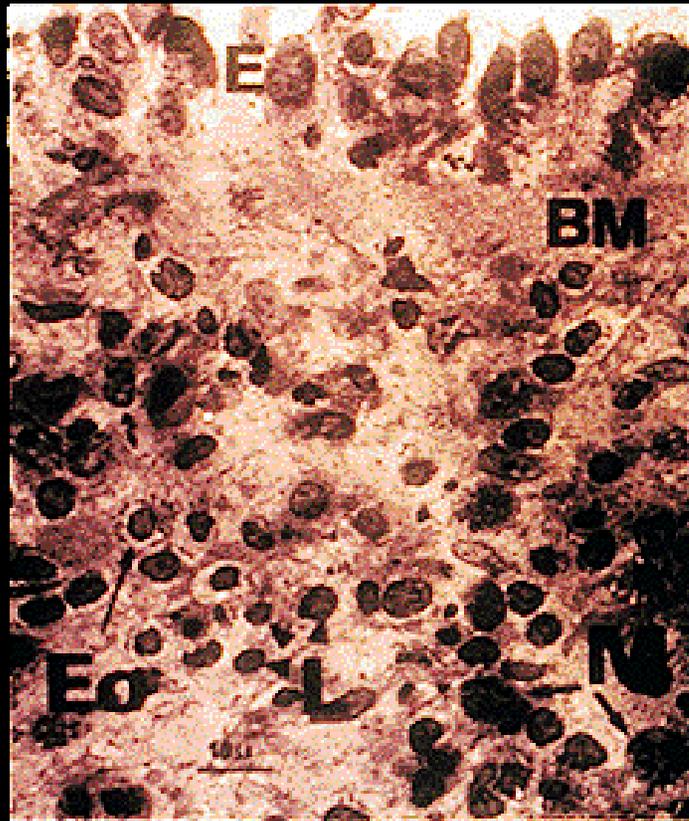


Amni Visnaga, also known as khellin, from which the cromone for DSCG was derived

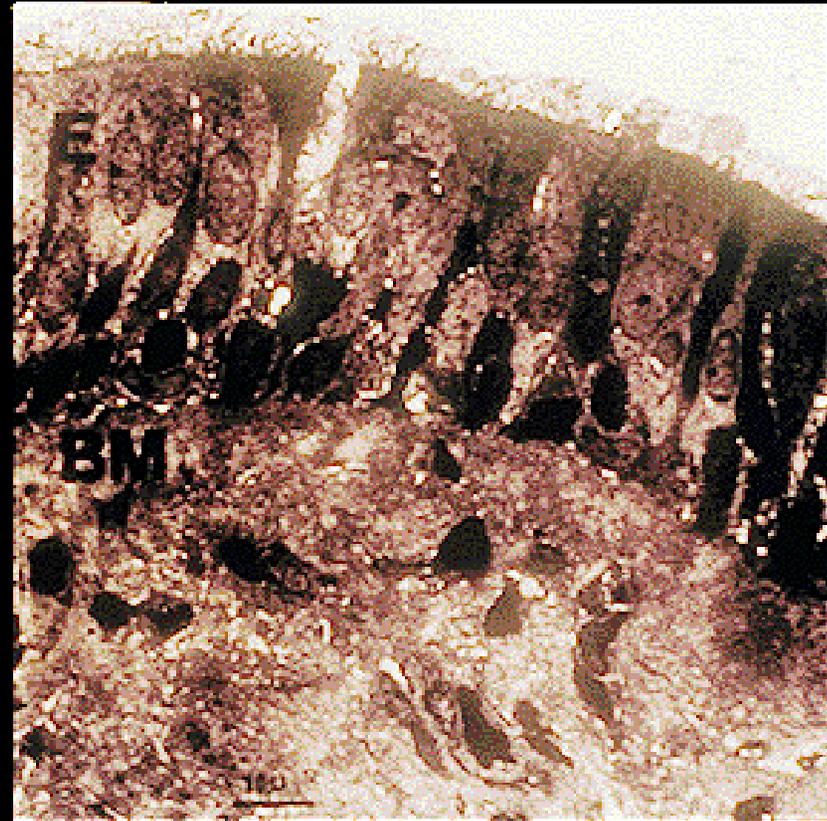
Inhaled Corticosteroids

- Effective in most cases
- Safe especially at low doses
- The anti-inflammatory of choice in asthma





Asthmatic



Steroid-treated asthmatic

Inhaled Steroids

Side Effects

- Growth: No significant effect at low to moderate doses.
- Bones: not important
- HPA axis: No serious clinical effect (high doses)
- Alteration of glucose and lipid metabolism: Clinical significant is unclear (high doses)
- Cataract: No increase risk
- Skin: Purpura, easily bruising, dermal thinning
- Local side effects





Spinhaler



Rotahaler



MANAGEMENT OF ACUTE ASTHMA

Assessment: History

- Symptoms
- Previous attacks
- Prior therapy
- Triggers

Physical examination:

Signs of airway obstruction:

- Fragmented speech
- Unable to tolerate recumbent position
- Expiration > 4 seconds
- Tachycardia, tachypnea and hypotension
- Use of accessory muscles
- Pulsus paradoxus > 10 mmhg
- Silent hyperinflated chest
- Air leak

Physical examination:

Signs of tissue hypoxia:

- Cyanosis
- Cardiac arrhythmia and hypotension
- Restlessness, confusion, drowsiness and obtundation

Physical examination:

Signs of Respiratory muscles fatigue:

- Increase respiratory rate
- Respiratory alterans (alteration between thoracic and abdominal muscles during inspiration)
- Abdominal paradox (inward movement of the abdomen during inspiration)

Investigations:

- Peak expiratory flow rate
- Pulse oxymetry
- ABG

■ ~~CXR~~



ONLY IN FEW CASES

The First Hour

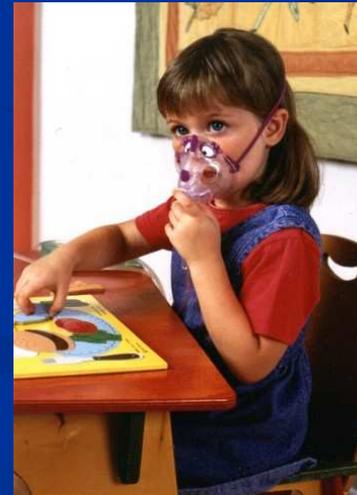
Oxygen

- Hypoxemia is common
- It worsens airway hyperreactivity
- Monitor saturation

Inhaled β_2 agonist

Every 20 minutes in the
first hour

Assess after each nebulizer



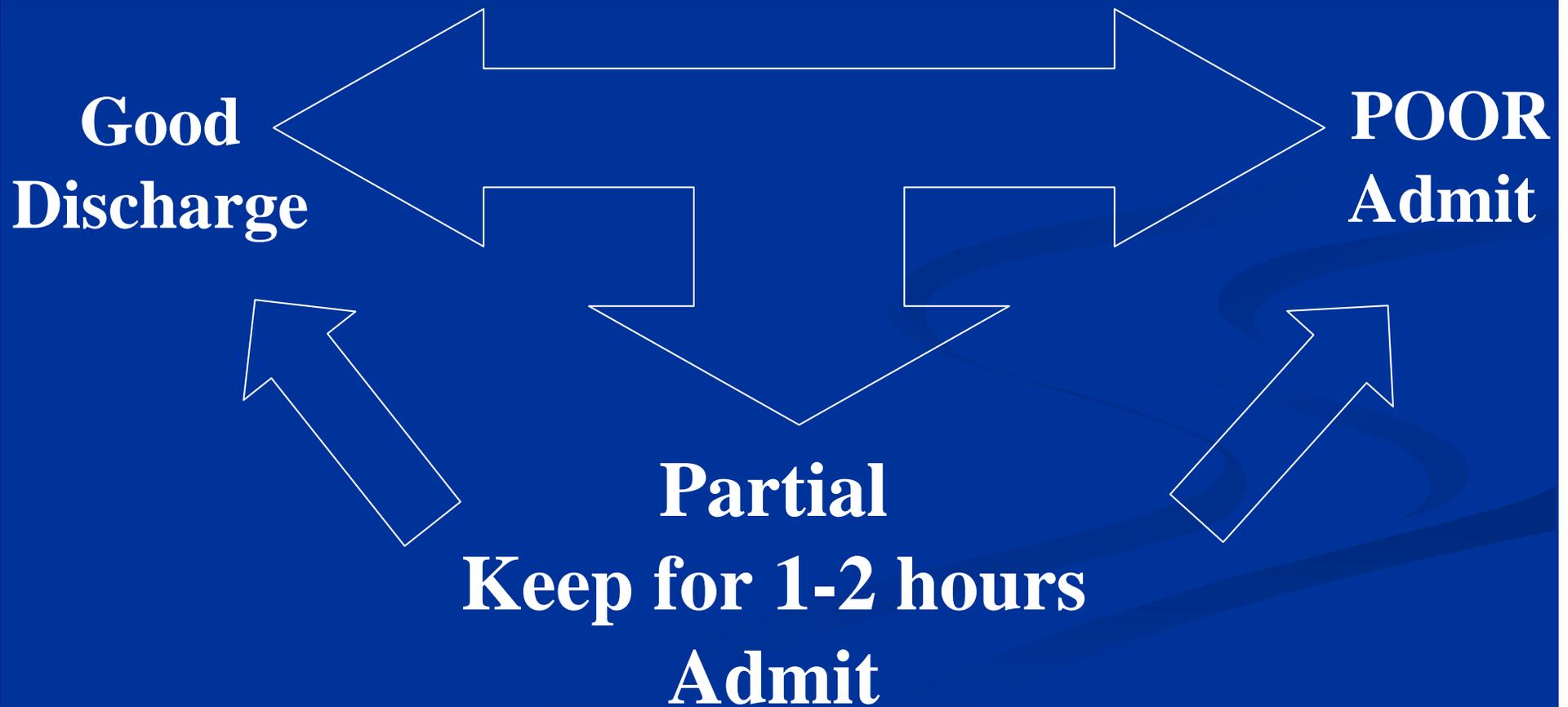
Steroids

- If not responding to the β agonist
- If severe in the beginning
- If on PO prednisone or high dose inhaled steroids.
- Previous severe attacks

Ipratropium Bromide

- Anti-cholinergic
- For severe cases
- Along with β 2 agonist

Response to the first hour



Discharge

- Follow up
- Give inhaled β 2 agonist
- Steroids
- When to come back?

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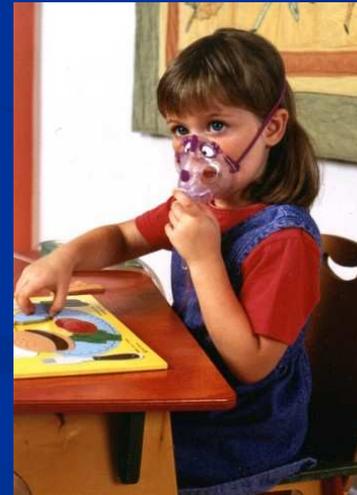
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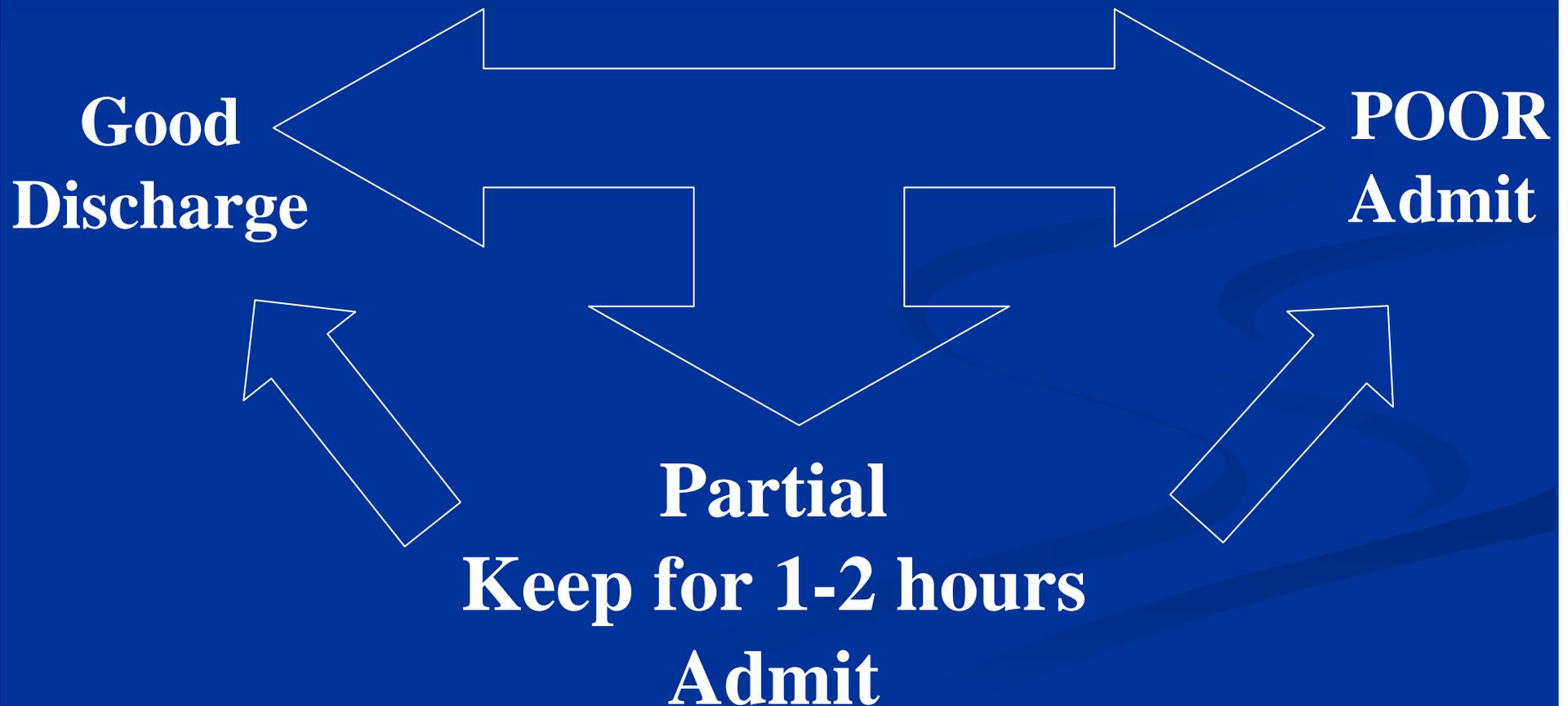
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