Management of acute asthma in children (aged <2 years) in hospital

DIAGNOSIS

A definitive diagnosis of asthma can be difficult to obtain in young children. Always consider other causes of wheeze and respiratory distress:

- bronchiolitis
- aspiration pneumonitis
- pneumonia
- tracheomalacia
- complications of underlying conditions (congenital anomalies, cystic fibrosis)

ASSESS ASTHMA SEVERITY

Moderate exacerbation
- SpO_2 ≥92%
- Audible wheezing
- Use of accessory neck muscles
- Still feeding

NB: If a child has signs and symptoms across categories, always treat according to their most severe features

Severe exacerbation
- SpO_2 <92%
- Cyanosis
- Marked respiratory distress
- Too breathless to feed

Life threatening asthma
- SpO_2 <92%
- Cyanosis
- Apnoea
- Bradycardia
- Poor respiratory effort

Oxygen via facemask/nasal prongs to achieve normal saturations

Discuss with paediatrician or PICU team

Give trial of ß$_2$ agonist: salbutamol up to 10 puffs via spacer and close fitting facemask

Consider soluble prednisolone 10mg

Nebulised ß$_2$ agonist: salbutamol 2.5mg or terbutaline 5mg

Consider adding nebulised ipratropium bromide 0.25mg

Give soluble prednisolone 10mg daily for up to 3 days

ASSESS RESPONSE TO TREATMENT

- Heart rate
- Pulse rate
- Pulse oximetry
- Supportive nursing care with adequate hydration

RESPONDING

- Continue ß$_2$ agonists
  - 1-4 hourly (moderate exacerbation)
  - 20-30 minutes (severe/life threatening exacerbation)
- Add or continue soluble prednisolone 10mg for up to 3 days

NOT RESPONDING

- Continue nebulised bronchodilators
- Arrange HDU/PICU transfer
- Consider chest x-ray

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