

Emergency 6.1: Acute severe asthma

Diagnosis

The presence of one or more of the following features suggests acute severe asthma:

- Peak flow less than 40% of predicted normal of the patient's best obtainable result if known (< 200 l/min if not known)
- Inability to talk in uninterrupted sentences
- Respiratory rate > 30/min
- Tachycardia > 120/min

Specific treatment

At home

Assess airway/breathing/circulation

Oxygen—high flow

Nebulized β_2 -agonists (e.g. salbutamol 5 mg, terbutaline 5–10 mg) or via a spacer

Prednisolone 40 mg orally

At hospital

Reassess airway/breathing/circulation

Oxygen—high flow

Nebulized β_2 -agonists (e.g. salbutamol 5 mg, terbutaline 5–10 mg) 4 hourly

Chest X-ray to exclude pneumothorax

Hydrocortisone 200 mg 4 hourly intravenously

Intravenous bronchodilators

If there is no improvement or if obviously life-threatening features are present (see p. 339) give intravenous aminophylline (250 mg over 30 min) or an intravenous β_2 -agonist (e.g. salbutamol 200 mg or terbutaline 250 μ g over 10 min). A β_2 -agonist is preferred if the patient is already taking oral theophylline.

Unhelpful treatment

Sedatives are absolutely contraindicated outside the intensive care unit

Antibiotics are not indicated unless there is radiological evidence of an infection

Indications for intensive care

Patients with features of life-threatening asthma require intensive monitoring by experienced staff. Patients with the following features require intensive care:

- hypoxia ($P_{aO_2} < 8$ kPa) despite 60% inspired oxygen
- hypercapnia ($P_{aCO_2} > 6$ kPa)
- cyanosis
- exhaustion
- bradycardia
- hypotension
- confusion or drowsiness
- unconsciousness
- respiratory arrest