

Management of acute asthma in adults

Criteria for admission

- B** Admit patients with any feature of a life-threatening or near-fatal asthma attack.
- B** Admit patients with any feature of a severe asthma attack persisting after initial treatment.
- C** Patients whose peak flow is greater than 75% best or predicted one hour after initial treatment may be discharged from ED, unless there are other reasons why admission may be appropriate.

Treatment of acute asthma

Oxygen

- C**
 - Give controlled supplementary oxygen to all hypoxaemic patients with acute severe asthma titrated to maintain an SpO₂ level of 94–98%. Do not delay oxygen administration in the absence of pulse oximetry but commence monitoring of SpO₂ as soon as it becomes available.
- A**
 - In hospital, ambulance and primary care, nebulisers for giving β_2 agonist bronchodilators should preferably be driven by oxygen.

Steroid therapy

- A** Give steroids in adequate doses to all patients with an acute asthma attack.
- ✓ Continue prednisolone (40–50 mg daily) until recovery (minimum 5 days).

Other therapies

- A** Nebulised magnesium sulphate is not recommended for treatment of adults with acute asthma.
- B** Consider giving a single dose of IV magnesium sulphate to patients with acute severe asthma (PEF <50% best or predicted) who have not had a good initial response to inhaled bronchodilator therapy.
- ✓ Magnesium sulphate (1.2–2 g IV infusion over 20 minutes) should only be used following consultation with senior medical staff.
- B** Routine prescription of antibiotics is not indicated for patients with acute asthma.

β_2 agonist bronchodilators

- A** Use high-dose inhaled β_2 agonists as first-line agents in patients with acute asthma and administer as early as possible. Reserve intravenous β_2 agonists for those patients in whom inhaled therapy cannot be used reliably.
- ✓ In patients with acute asthma with acute severe or life-threatening features the nebulised route (oxygen-driven) is recommended.
- A** In patients with severe asthma that is poorly responsive to an initial bolus dose of β_2 agonist, consider continuous nebulisation with an appropriate nebuliser.

Ipratropium bromide

- B** Add nebulised ipratropium bromide (0.5 mg 4–6 hourly) to β_2 agonist treatment for patients with acute severe or life-threatening asthma or those with a poor initial response to β_2 agonist therapy.

Referral to intensive care

Refer any patient:

- requiring ventilatory support
- with acute severe or life-threatening asthma, who is failing to respond to therapy, as evidenced by:
 - deteriorating PEF
 - persisting or worsening hypoxia
 - hypercapnia
 - ABG analysis showing \downarrow pH or \uparrow H⁺
 - exhaustion, feeble respiration
 - drowsiness, confusion, altered conscious state
 - respiratory arrest.

Follow up

- ✓
 - It is essential that the patient's primary care practice is informed within 24 hours of discharge from the emergency department or hospital following an asthma attack.
 - Keep patients who have had a near-fatal asthma attack under specialist supervision indefinitely.
 - A respiratory specialist should follow up patients admitted with a severe asthma attack for at least one year after the admission.