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Use of Ipratropium Bromide for Acute Asthma

# Use of Ipratropium Bromide for Acute Asthma

EMERGENCY CARE EVIDENCE IN PRACTICE SERIES

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## Why is this important?

Asthma is a common condition that continues to increase in Australia and globally. The prevalence of asthma in Australia is among the highest in the world, with over two million people affected.[1]

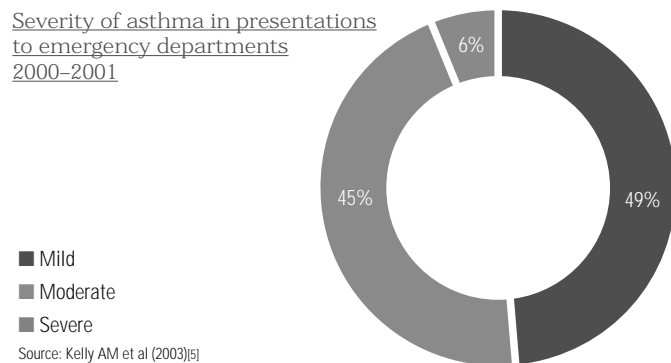
Asthma makes up a large proportion of presentations to emergency departments and patients often re-present with further deterioration over the next 12 months.[2–4]

The initial assessment of the severity of an asthma episode is critical in acute management. A recent multi-centre Australian study has shown that the vast majority of acute asthma presentations to Australian emergency departments are mild to moderate (95.5 per cent in children and 90.5 per cent in adults).[5]

In the management of severe acute asthma, which makes up just six per cent of cases, the addition of ipratropium bromide to the standard drugs used improves health outcomes with no significant additional side effects.[6] However, there is little evidence to support use of ipratropium bromide in cases of moderate severity and it is not recommended in the management of mild acute asthma.[1]

**There is substantial evidence that ipratropium bromide is of limited usefulness in acute episodes of mild to moderate asthma.**

Severity of asthma in presentations to emergency departments 2000–2001



Source: Kelly AM et al (2003)[5]

Use of Ipratropium Bromide for Acute Asthma

## Best available evidence

Numerous clinical practice guidelines recommend that, along with oxygen, corticosteroids and beta2-agonists, multiple doses of ipratropium bromide be used in the management of patients with severe and life threatening asthma attacks, or those with a poor initial response to beta2-agonist therapy.[1,7,8] Australian guidelines indicate that ipratropium bromide use is optional in the management of moderate acute asthma and recommend against its use in patients with mild acute asthma.[1,8]

These recommendations are broadly in line with the findings of two published systematic literature reviews. A Cochrane systematic review [9] of acute asthma in children found that a single dose of ipratropium bromide was of no additional benefit in children with mild to moderate asthma. Another evidence-based review [10] found that there was no apparent benefit of adding single doses of ipratropium bromide to treatment of those with mild to moderate asthma.

## Current practice

The *Snapshot of acute asthma study* [5] was a prospective, observational study involving 38 emergency departments in Australia. In children, nearly 38 per cent of patients presenting with mild asthma and 66 per cent of those presenting with moderate asthma received ipratropium bromide. In adults, the figures were 64 per cent and 83 per cent respectively.

## Implications

There is substantial evidence that ipratropium bromide is of limited usefulness in acute episodes of mild to moderate asthma. Given that most presentations to the emergency department are mild to moderate in severity, many patients may therefore receive an expensive therapy with little evidence for its efficacy.

In practice, the formal assessment of asthma severity is not part of routine procedure, which may lead to the over-treatment of many patients with less severe attacks. Whilst it is easy to focus on increasing the use of effective treatments, it is equally important that we do not continue to use treatments when there is no evidence to support their application.

Using ipratropium bromide in accordance with best available evidence would provide cost savings without detrimental effects to patients and minimise the (albeit) small effect of medication reactions.

Use of Ipratropium Bromide for Acute Asthma



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