key points

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Dr Matthew Lockyer
GP, Suffolk, UK

Asthma is a heterogeneous disease characterised clinically by recurrent episodes of wheeze, cough, and breathlessness. Physiologically it is defined by bronchospasm resulting in variable airflow obstruction. Patients typically present with more than one of wheeze, cough and breathlessness occurring episodically. At present asthma is a clinical diagnosis. The difficulty with this approach is that children may be overdiagnosed and then overtreated. It is likely that investigation-based approaches such as exhaled nitric oxide measurements and demonstrating reversibility will play a much greater role. These approaches are currently being reviewed by NICE and new guidelines are expected in the near future. BTS/SIGN advise that children with recurrent episodes, documented wheeze and atopy are considered to have a high probability of asthma. These children should receive a six-week trial of inhaled corticosteroids. A good response to treatment confirms the diagnosis.

Exposure to environmental tobacco smoke increases wheezing in infancy, risk of persistent asthma, number of exacerbations and need for inhaled corticosteroids. Parents should be strongly advised to stop smoking and offered appropriate support. There is no evidence that strategies to reduce house dust mite exposure improve asthma control and these should not be recommended.

The aim of asthma treatment is complete control of symptoms as soon as possible while minimising side effects and inconvenience to the patient. Therapy should be escalated in children who are symptomatic more than three times a week, using their reliever inhaler more than three times per week or waking one night a week. Children on low dose inhaled corticosteroids are at low risk of side effects. Those on medium and higher doses are at risk of poor growth and adrenal suppression. The dose of inhaled corticosteroids should be reduced when control is achieved. However, there is no clear evidence on how best to do this.

Studies have shown that in children under 12 years of age, metered dose inhalers with an appropriate spacer are as effective as any other devices. There is no evidence to support the use of breath-actuated inhalers. In primary care children should be monitored at least once a year. All parents and older children should be offered a written action plan. This should include details of the patient's regular medicines, how to recognise deterioration and what to do in the event of an attack.

Children should be referred to secondary care if: the diagnosis is unclear; control remains poor despite monitored treatment; they have suffered a life-threatening attack or red flag features are present.