10-MINUTE CONSULTATION

Asthma unresponsive to simple treatment in a child

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USEFUL READING

British Thoracic Society, Scottish Intercollegiate Guidelines Network. *British guideline on the management of asthma: a national clinical guideline*. Rev ed. July 2007. www.brit-thoracic.org.uk/c2/uploads/asthma_fullguide_line2007.pdf

Grigg J. Management of paediatric asthma. *Postgrad Med J* 2004;80:535-40.

A 7 year old boy with recurrent wheeze was diagnosed with asthma six months ago. He was started on two metered dose inhalers: a short acting β_2 agonist, as required, and an inhaled corticosteroid 100 μg (beclometasone dipropionate equivalent) twice daily. When his symptoms continued his steroidal inhaler was increased to 200 μg twice daily, but he presents to the surgery with regular wheeze.

What issues you should cover

Assess control—wheeze, cough, nights disturbed, absence from school, and interference with play or exercise. Assess frequency of use of short acting β_2 agonists and courses of oral steroids. Ask about emergency consultations or hospital attendances and possible triggers, especially smoking and common allergens such as dust mite, pet dander, and pollens, as well as viral infections, exercise, cold air, emotional upset, and non-steroidal anti-inflammatory drugs. Ask about school: can he use the inhalers with the spacer device, and can he take his β_2 agonist before activities?

Compliance—evaluate the child and carer's understanding of asthma. What are their perceptions of asthma control and the importance of compliance? Have they recognised and avoided triggers? Do they understand their medicines ("preventer" and "reliever")? Are they using the spacer device and is it washed regularly? If compliance is in doubt check if prescriptions have been filled.

Consider alternative diagnoses—history of wet cough, poor weight gain, stridor, or abnormal voice all suggest other causes (cystic fibrosis, bronchiectasis, or upper airway anomalies). Wheezing should ideally be heard by a doctor rather than based on parental reports, which may misinterpret upper airway noises.

Examination—should include ear, nose, and throat and chest examination, and determination of weight and height centiles. Note evidence of other atopic conditions (eczema, rhinitis, conjunctivitis). Clubbing or focal chest signs suggest a different diagnosis. Assess inhaler technique with spacer. Peak flow readings may be of use if compared with a recent personal best when the child was well.

What you should do now

This child is currently receiving maximum treatment within step 2 of the British Thoracic Society's asthma guidelines. These guidelines make separate, stepwise

treatment recommendations for children aged under 5 years and 5-12 years and have been developed using current best evidence.

Optimise control—once obvious triggers, compliance, and alternative diagnoses have been addressed, increase medication to step 3 of the asthma guidelines (add-on therapy). The first choice in children (5-12 years) is an inhaled long acting β_2 agonist (LABA). Continue inhaled steroids. Reassess the benefit of this treatment after a few weeks before deciding whether to continue. If control remains inadequate consider introducing a leukotriene receptor antagonist. The response to antileukotrienes is often obvious, and if no effect is noticed after 4-6 weeks then discontinue. Ideally, consider further treatment options in consultation with a specialist. Increasing inhaled steroid beyond 400 μg per day must be justified as it may be associated with systemic side effects. Treat until asthma is optimally controlled before reducing medication slowly (over 3-6 months) to the lowest dose that maintains control.

Educate and review regularly—with doctor or asthma nurse specialist. Review of asthma care is rewarded under the GP contract. Assess inhaler technique and compliance at each consultation, and measure the child's growth regularly. Over time an individualised asthma management plan should be negotiated with the GP, patient, and family in a way that will ultimately improve compliance and outcome. Involving school staff may be helpful when compliance is poor at home. The plan would include indications for changes in medication and when to access emergency care. Prescribing a course of "rescue" prednisolone for home, with clear instructions for use, reduces emergency admissions. Continue to advise on effective methods of avoiding allergens and the management of other atopic conditions.

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Indications for referral for specialist opinion and further investigation

- Failure to respond to conventional treatment with good compliance
- Diagnosis unclear or in doubt
- Failure to thrive or persistent wet cough
- Unexpected clinical findings

Consider early referral in younger children, especially preschoolers