Pharmacologic Management of Asthma

Key Points to Cover With Patients

- Goals of therapy are to (1) minimize symptoms, ideally no symptoms day or night; (2) minimize asthma exacerbations, ideally no exacerbations requiring emergency department visits or prednisone; (3) maintain normal activity levels and school attendance; (4) maintain normal or near normal pulmonary function; and (5) minimize adverse effects from medications.
- Key components of therapy are to control those factors that contribute to asthma (environmental control), pharmacotherapy, parent and patient education, assessment, and monitoring.
- Agents used for asthma include quick-relief medications, such as albuterol, and controller medications, such as inhaled corticosteroids, leukotriene receptor antagonists (LTRAs), cromolyn, or theophylline. Quick-relief medications are used for the relief of symptoms of asthma. Controller medications are used daily to control asthma. These medications can be delivered to the patient in a variety of forms, including nebulizers, metered-dose or dry powder inhalers, or pills. Inhaled forms are preferred, with the exception of LTRAs.
- Pharmacologic agent selection is based on the chronicity and severity of asthma, the age of the child, and in cooperation/partnership with the patient and/or parents. Every patient is an individual, and treatment approaches need to be individualized. Children with symptoms more than twice weekly, or nocturnal awakening with symptoms more than twice monthly, require controller medications. Children who have severe exacerbations requiring oral corticosteroids more often than every 6 weeks also should be on controller therapy.
- A stepwise approach to therapy is used, with aggressive therapy initially to maintain rapid control, with a step-down process once control is maintained.
- Inhaled corticosteroids are the preferred anti-inflammatory therapy for patients of all ages with persistent asthma. Side effects at recommended doses are not persistent or clinically significant. In some situations, however, other controller therapies might be considered.
- Exercise is a trigger for asthma in most children and can usually be prevented if they use their quick-relief medication shortly before exercise.
- A written management plan, including instructions on management of exacerbations, should be provided to all patients and/or parents. A similar plan should be provided for school, if applicable.
- Peak flow monitoring should be considered in children with moderate or severe persistent asthma or in those who have difficulty recognizing symptoms.

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