Antibiotic Prescribing During Pediatric Ambulatory Care Visits for Asthma


PURPOSE OF THE STUDY. To determine how frequently antibiotics are prescribed during pediatric asthma visits without documented coexisting diagnoses that justify their use.

STUDY POPULATION. Pediatric patients <18 years of age seen in outpatient offices and emergency departments in the United States for asthma between 1998 and 2007.

METHODS. Data from the National Ambulatory Medical Care Surveys and the National Hospital Ambulatory Medical Care Survey were examined for patients seen for asthma in clinics and emergency departments. Each visit was assessed with regard to reason for visit and diagnoses (by using *International Classification of Diseases, Ninth Revision, Clinical Modification* codes), medications prescribed, physician specialty, participation of allied health professionals, patient demographics, and performance of asthma education (after 2001). Multivariable logistic regression models then were used to assess associations with the prescription of antibiotics.

RESULTS. Antibiotics were prescribed during 15.6% of 5198 ambulatory care visits for asthma without a coexisting diagnosis to justify treatment. This finding equates to ~1 million pediatric ambulatory patient visits per year in the United States, in which patients with asthma are treated with antibiotics without documentation of a reason for doing so. Macrolides were prescribed nearly 50% of the time, followed by aminopenicillins (26.3%) and cephalosporins (20.6%). Multivariate analysis revealed that antibiotics were prescribed more in the winter (odds ratio [OR]: 1.92; 95% confidence interval [CI]: 1.05–3.52), and when systemic steroids were also prescribed, the OR = 2.69 (95% CI: 1.68–4.3). Treatment in an emergency department was associated with decreased likelihood of antibiotic prescribing (OR: 0.48; 95% CI: 0.26–0.89), whereas in the office-based setting, asthma education during the visit was associated with reduced antibiotic prescribing (OR: 0.46; 95% CI: 0.24–0.86).

CONCLUSIONS. Approximately 1 of every 6 pediatric patients evaluated for asthma in an ambulatory care setting is prescribed antibiotics without a documented indication, which indicates a need for either better documentation or more education and interventions to prevent the unindicated use of antibiotics for asthma exacerbations.

Increased Risk of Pertussis in Patients With Asthma


PURPOSE OF THE STUDY. Pertussis infection remains a major public health problem with reported cases increasing more than 27-fold since 1976. The prevalence of asthma has also increased, with up to 17% of children affected. The purpose of this retrospective study was to determine if patients with asthma were at increased risk of pertussis.

STUDY POPULATION. This population-based, case-controlled study compared asthma history in adults and children with documented pertussis (positive polymerase chain reaction [PCR]) to that of matched controls suspected of having pertussis but with negative PCRs.

METHODS. Pertussis PCRs during a 2-year outbreak in Olmstead County, MN, were used to identify 223 pertussis-positive cases; 164 patients were eligible for inclusion. From a pool of 5537 pertussis-negative patients, 328 age- and sex-matched controls were identified. A previously validated formula was used to estimate the population attributable risk percentage of asthma for pertussis infections.
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