

## Analysis of Prescriptions for Asthma at Clinics

Eui Kyung Lee, Sukhyang Lee<sup>1</sup>

Korea Institute for Health and Social Affairs,  
Sookmyung Women's University, Graduate School of Clinical Pharmacy<sup>1</sup>

**Background:** Asthma is a chronic inflammatory disease of the airway and the prevalence rate is increasing. As the burden of asthma to the society is significant due to the increasing hospital admissions and emergency visits, National Heart, Lung and Blood Institute (NHLBI, USA) and World Health Organization (WHO) have developed comprehensive guidelines for diagnosis and management of asthma. The guidelines were also developed in Korea in 2000, but the present pattern of asthma prescriptions has not been studied. The purpose of this study is to analyze the pattern of asthma prescriptions by primary physicians and to compare the pattern with the asthma guidelines.

**Methods:** Both the National Health Insurance claims data and scenarios survey data were analyzed. First prescription data for asthma were obtained from the Korean National Health Insurance claims database of January 2002. Ten percent of the primary health care providers were sampled based on their specialty areas, and 20% of the claim cases were randomly chosen. Secondly, 710 primary physicians specializing in internal medicine in Seoul, Korea were provided with two scenarios of asthmatic patients, one mild and the other severe. By mail or interview, the physicians were asked several questions about their present pattern of asthma management for the patients in each scenario in November 2002. Prescription patterns were analyzed based on the asthma guidelines.

**Results:** Study results showed that prescription rate for oral beta-2 agonists was 44.3%, and that for oral theophylline was 46.9% in National Health Insurance Data. Oral steroids were prescribed for the 28.2% of the claims. Utilization of inhalers was low for both bronchodilators (20.3%, inhaled beta-2 agonists), and steroids(8.4% inhaled steroids). Bronchodilators were more preferred to the long-term anti-inflammatory controllers among the primary health care providers. Prescription rate for antibiotics was 46.0% for asthmatic patients. Also gastrointestinal drugs were prescribed for 59.0%, antitussives 65.3%, antihistamines 25.3% and analgesics 29.4% respectively. In terms of the survey results for the scenarios, 325 physicians responded among 710 primary physicians (response rate 46%). 71% and 81% of the physicians answered that they would prescribe oral theophylline for the mild and severe asthmatics, respectively. 53% and 64% of the physicians answered that they would prescribe oral  $\beta_2$ -agonist for the mild and severe asthmatics,

respectively. However, 36% and 56% of the physicians answered that they would prescribe inhaled steroids for the mild and severe asthmatics, respectively.

**Conclusion:** The primary physicians prefer oral bronchodilators to inhaled steroids in asthma management. This study presented that the prescribing pattern of the primary health care providers for the asthma was quite different from the national and international guidelines. More efforts should be made to reduce the difference between the present pattern of asthma management by primary physicians and the national guidelines.

**Key Words:** Asthma, Prescription pattern, Guidelines, Inhalers