Reduced Likelihood of Multiple Hospitalizations in Patients Newly Diagnosed with Allergic Rhinitis Who Receive Intra-nasal Corticosteroids

Hankin CS,1 Cox L,2 Bronste A,1 Wang Z,1 Buck PO,3 Lepore M3

1BioMedEcon, LLC, Moss Beach, CA; 2Nova Southeastern University School of Osteopathic Medicine, Fort Lauderdale, FL; 3Teva Pharmaceuticals, Inc., Frazor, PA

This study suggests that treatment of newly diagnosed AR with INS can reduce the morbidity of AR, specifically the likelihood of multiple asthma-related hospitalizations.

These findings corroborate those of previous retrospective studies reporting that pharmacological treatment of AR reduces the risk of asthma-related hospitalizations and emergency department visits.

Despite the benefits of INS, a recent analysis of U.S. managed care claims data found that only about 1/3 of health plan members who were prescribed a medication for the treatment of AR were receiving INS.

The superior efficacy of INS for treating symptoms of AR and its potential role in asthma prevention have led to an increasing utilization of INS may be critical to improving control of respiratory diseases.

Limitations of this study include its retrospective nature, which precludes definitive conclusions regarding causality; the possibility that groups may have different undefined variables that were not controlled for by matching procedures; and the inability to generalize findings beyond the patient population of Medicaid enrollees.

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RATIONALS: Given that 1) asthma research with administrative claims data often characterizes asthma severity and control in terms of frequency of asthma-related hospitalizations, and 2) the presence of concomitant AR is correlated with asthma morbidity, we examined an administrative claims database to assess whether treatment with intranasal corticosteroids (INS) can reduce the risk of multiple asthma-related hospitalizations in patients newly diagnosed with asthma or rhinitis.

METHODS: This 12-year (6/1997-7/2009) retrospective matched cohort study of Florida Medicaid beneficiaries selected patients aged ≥12 years with newly diagnosed asthma or rhinitis. Two cohorts were created: 1) an INS cohort for whom the first INS fill was preceded by an AR diagnosis and followed by ≥2 asthma-related hospitalizations; and 2) a control cohort of patients with ≥2 asthma-related hospitalizations who did not receive INS prior to the index AR diagnosis (Figure 1).

RESULTS: Among all enrollees (N=73,324), there were 8,341 patients aged ≥12 years with newly diagnosed AR who were matched to 5,724 controls. The matched INS (N=2,617) and control (N=5,724) cohorts had similar baseline characteristics (Table 1).

As shown in Table 2, in the 3 years after INS initiation, patients who received INS were 45.6% less likely to have ≥2 asthma-related hospitalization stays than their matched control counterparts (OR 0.544, 95% CI 0.340 to 0.870, p=0.010). Among eligible control matches (Group E3), we identified those with at least 3 years of data following index INS claim (OR 0.306, 95% CI 0.189 to 0.491, p=0.001).

CONCLUSIONS: The matched INS and control cohorts had similar baseline characteristics (Table 1).

1.Patients were matched on:
   - Sex
   - Age at first AR diagnosis (≥24 months)
   - Race/ethnicity
   - Charlson Comorbidity Index 1 year prior to index AR diagnosis

2. For Group G1, we identified the period from first AR diagnosis to index INS fill and matched controls to determine the occurrence of costly asthma exacerbations in patients with concomitant AR and asthma who received INS therapy.

3. We then identified comorbid allergy-related conditions (asthma, atopic dermatitis, conjunctivitis) in the year prior to index AR diagnosis.

4. Among Group G1 patients, we identified those with at least 3 years of data following their match date (Group G3).

In Group G1, 364 (13%) patients were matched to each INS patient (Group G1). If an INS patient had more than 3 matches, we randomly selected 3 patients for matching.

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