Medical Utilization and Cost in Patients with Overlap Syndrome of Chronic Obstructive Pulmonary Disease and Asthma

Background: Little information is available regarding medical utilization and cost in patients with overlap syndrome of COPD and asthma.

Purpose: To analyze medical utilization and cost in patients with overlap syndrome and to compare them to COPD patients without asthma.

Methods: Using the 2009 Korean National Health Insurance (NHI) database, COPD patients were identified. Medical utilization and costs were also analyzed.

Results: Of a total of 185,147 patients identified with COPD, 101,004 patients were classified with overlap syndrome of COPD and asthma and 84,143 patients with COPD without asthma. In 2009, the percentages of ER visits, admissions, and ICU admissions were 14.6%, 30.5%, and 0.5%, respectively, in the patients with overlap syndrome group and 5.0%, 14.1%, and 0.2%, respectively, in the COPD patients without asthma group (P<0.05 for all comparisons). The cost of medical utilization was 790±71 US dollars per person and 3,373±4,628 dollars per person for outpatient and inpatient services, respectively, in the patients with overlap syndrome and 413±512 and 3,010±5,013, respectively, in the COPD patients without asthma (P<0.05 for all comparisons). Multiple linear regression showed that age, sex, overlap syndrome, and hospitalization in the last year were significant factors affecting medical utilization and cost.

Conclusions: In patients with overlap syndrome, both medical utilization and cost were higher than in COPD patients without asthma.

The Overlap Syndrome of Asthma and COPD: Its Prevalence and Clinical Characteristics

Background: Although asthma and COPD have been accepted as different diseases, many elderly patients show clinical features of both asthma and COPD, so called "overlap syndrome". The purpose of our study was to examine the prevalence and clinical characteristics of the overlap syndrome (OS).

Methods: We conducted a retrospective survey of patients above 40 years who had visited our hospital from January 2005 to June 2009 because of obstructive lung disease. Patients with structural lung disease were excluded and patients with short follow-up duration were excluded. Based on lung function profile, we classified subjects into COPD and OS groups, and analyzed their prevalence, demographics and lung function.

Results: 2,105 subjects were included. 240 (11.4%) and 630 (29.9%) were found to have OS and COPD, respectively. The mean age was similar in both group (66.40 years vs 67.67 years, P=0.553) but age of symptom onset was earlier in OS group than COPD group (38.42 years vs 58.17 years, P<0.001). OS group showed lower baseline postbronchodilator FEV1 than COPD group (50.88% vs 57.65%, P=0.04). After additional treatment with tiotropium, OS and COPD groups showed significant improvement of postbronchodilator FEV1 (5.50%, P=0.012; 7.68%, P=0.000).

Conclusion: Certain proportion of aged patients have overlap syndrome. Although their symptom develops earlier and baseline lung function is worse, intensive treatment can improve lung function.