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Use Patterns of Long-acting Bronchodilators in Routine COPD Care: The OUTPUT Study

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Background

COPD is the fourth leading cause of death in the world. In the case of exacerbations or persistent symptoms, regular treatment with long-acting bronchodilators is recommended to control the symptoms, reduce exacerbations and improve health status.

Objectives

To describe patterns of drug utilization among patients diagnosed with COPD, to measure continuity with long-acting bronchodilators, to identify determinants of not receiving long-acting therapy continuously.

Methods

We identified a cohort of patients discharged from hospital with diagnosis of COPD between 2006 and 2008. Patients were observed for a two-year follow-up period, starting from the day of discharge. Follow-up was segmented in six-month periods, in order to dynamically evaluate prescription patterns of Long-Acting Beta-Agonists (LABA), tiotropium, and inhaled corticosteroids. Patients with prescriptions for LABA and/or tiotropium in each of the six-month periods were defined as "continuously treated with long-acting bronchodilators." The degree of drug treatment coverage was measured through the Medication Possession Ratio (MPR). Logistic regression was performed to identify determinants of not receiving long-acting bronchodilators continuously.

Results

A total of 11,452 patients diagnosed with COPD were enrolled. Only 34.8% received long-acting bronchodilators continuously. The MPR was greater than 75% in 19.6% of cases. Among the determinants of not receiving long-acting bronchodilators continuously, older age and co-morbidities played an important role.

Conclusions

In clinical practice, the COPD pharmacotherapy is not consistent with clinical guidelines. Medical education is needed to disseminate evidence-based prescribing patterns for COPD, and to raise awareness among physicians and patients on the health benefits of an appropriate pharmacological treatment.