EXACERBATIONS AND HEALTHCARE RESOURCE UTILIZATION AMONG COPD PATIENTS IN SWEDEN
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INTRODUCTION

By 2020, chronic obstructive pulmonary disease (COPD) is projected to become the third leading cause of death worldwide (1). In Sweden, the prevalence of COPD is considered to be between 4.6%, representing approximately 500,000 patients (2, 3). Treatment of COPD concentrations on prevention of exacerbations, as it is an important measure of disease severity in terms of impact on disease progression, length of recovery time, health resource utilization (HRU), overall morbidity and mortality.

The aim of this registry-based study was to describe the burden of COPD patients in Sweden in terms of exacerbations, HRU use and medication costs.

AIM

METHODS

Patients with a COPD (ICD-10 J40-J44) or chronic bronchitis (ICD-10 J41 and J42) diagnosis at age of 40 years on 1.7.2009 were identified from national databases in Sweden (9.9 million inhabitants).

Patients were followed until 1.7.2010 or death. Severe exacerbations were defined as hospitalizations due to respiratory disease, and HRU was measured by all-cause hospitalizations and secondary care out-patient visits. Severe COPD patients (yes/no) were identified as those with at least two severe exacerbations during the previous year and ongoing usage of ICS-LABA and/or LAMA at baseline.

Data from the Centre for Epidemiology at the Swedish National Board of Health and Welfare, linked to the Swedish Prescribed Drug Register (filled prescriptions), the Swedish Hospital Discharge Register, the Swedish Hospital Out-Patient Register, the Swedish Death Register and the Swedish Cancer Register were utilized. The social security numbers of identified patients were replaced with study identification numbers at the Swedish National Board of Health and Welfare prior to data processing.

The crude and adjusted relative ratios for severe exacerbations and HRU together with the 95% confidence intervals were calculated during follow-up for the severe COPD status (yes/no) using a Poisson regression model. The adjusted model included gender, age, years since diagnosis and Charlson comorbidity index (CCI) (A), at baseline.

RESULTS

In total, 38,548 patients (mean age 72 years, 54% females) were identified with COPD/ CB (Table 1). The mean duration of disease for all patients was 4.4 years (Table 1). The most common comorbidities were cardiovascular disease (including coronary artery disease, congestive heart failure, atrial fibrillation and myocardial infarction), hypertension, pneumoconiosis and arthritis (as CCI Table 1). In total, 42.2% of the COPD/CB patients had at least one hospitalization, 71.3% at least one secondary care out-patient visit, and 15.2% had at least one respiratory-related hospitalization within one year of VABM (Table 1). Patients with a higher number of hospitalizations during one year prior to baseline have a higher comorbidity measured by CCI values (Table 1). Of the COPD/CB patients, 29.9% had at least one purchase of systemic corticosteroids and 53.6% systemic antibiotics (Table 1). Of all 12.7% had no COPD medications, 5.8% had KS therapy with ICS/LABA and/or LAMA, and 5.4% only rescue medications (Table 3). More than one third of the patients used a beta-blocker (Table 3). Of all 8.5% were classified as severe COPD patients. This status of being a severe COPD patient predicted a 8.3-fold increased adjustment in severe exacerbation rate and 1.8-fold increase in the adjusted HRU rate during the following year (Table 4).

CONCLUSIONS

Patients with severe COPD continue to experience significantly increased rate of severe exacerbations and HRU during one-year follow-up than the patients with less severe condition. COPD/CB in Sweden has a high prevalence of cardiovascular and cerebrovascular disease. Patients with severe COPD/CB would benefit from novel treatments aimed to reduce further exacerbations.

REFERENCES

For detailed information about the whole study, please visit: www.epidresearch.com

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