COPD Exacerbation Profile in Chile: Preliminary Results from IntegraMédica Cohort 2018–2020

Poster no. EPH87

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Background

Chronic obstructive pulmonary disease (COPD) is a leading cause of morbidity and mortality worldwide with an economic and social burden that is both substantial and increasing, and varies across countries.[1] In Latin America, COPD prevalence ranges between 6.2% and 19.6% in individuals ≥40 years of age[2]

Although several studies (including the population-based surveys PLATINO and PREPOCOL) have provided COPD prevalence data in Latin America, data is limited and there are substantial rates of under and overdiagnosis due to lack of spirometric confirmation[2,3] It is therefore necessary to increase the evidence for COPD in this region. There are very few studies that evaluate COPD patient characteristics, treatment patterns, and exacerbations in Chile, specifically, particularly among large patient populations

The PATTERN (**P**atient ch**A**racterization, **T**reatment pat**TE**rns, **R**esource utilization and costs among COPD patients in 4 Latin America**N** countries) study has been conducted in Argentina, Brazil, Chile, and Colombia

This poster shows the preliminary results from the PATTERN Chilean analysis, that aimed to describe the demographic characteristics, comorbidities, and exacerbations in a cohort of patients with COPD in Chile

Methods

Study design

Retrospective cohort study using IntegraMédica (a network of ambulatory medical centers) electronic medical records of patients with COPD

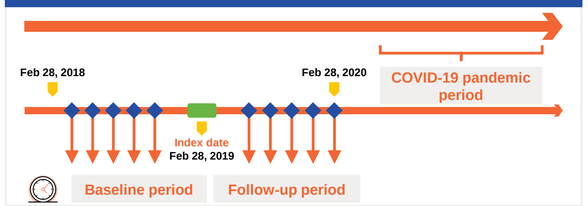
Data were analyzed 1 year before index (baseline) and 1 year post-index (follow-up) **(Figure 1)**

The index date was fixed at February 28, 2019 to avoid data from the COVID-19 pandemic period in Chile

Moderate exacerbation: prescription of systemic corticosteroids/antibiotics

Severe exacerbation: emergency visit or hospitalization due to COPD

Figure 1. Study design

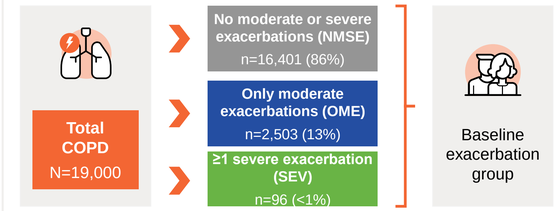


Eligibility

Inclusion criteria
Aged ≥40 years at index
Health problem related to COPD registered before Feb 28, 2018, which was defined and identified according to a J40-J44 ICD-10 code or GES-38 code (a Chilean health system-specific code)
Data available 1 year before and 1 year after index date

COPD, chronic obstructive pulmonary disease; GES, Explicit Health Guarantee; ICD-10, International Classification of Diseases – 10th edition.

Patient groups



Baseline patient characteristics

Baseline patient characteristics are shown in **Table 1**

Table 1. Patient characteristics

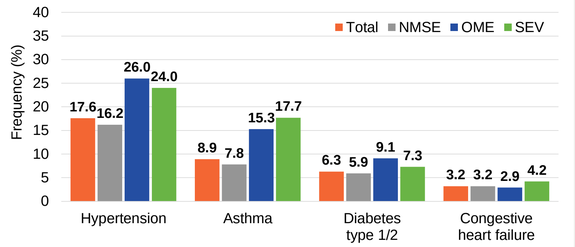
	Total N=19,000	NMSE n=16,401	OME n=2,503	SEV n=96
Age (years) at index, mean	64	65	61	73
Female, %	60	59	67	62

Comorbidities

The most frequently reported comorbidities in the overall cohort were hypertension, asthma, diabetes type 1/2, and congestive heart failure **(Figure 2)**

Results

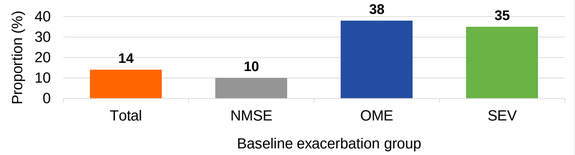
Figure 2. Frequency of comorbidities



Moderate/severe exacerbations during follow-up

The proportions of patients with ≥1 moderate/severe exacerbation during follow-up are shown in **Figure 3**

Figure 3. Proportion of patients with ≥1 moderate/severe exacerbation during follow-up, by baseline exacerbation group



Severe exacerbations during follow-up

The proportions of patients with ≥1 severe exacerbation during follow-up were 0.2% (total), 0.1% (NMSE), 0.1% (OME), and 16.6% (SEV) **(Figure 4)**

The severe exacerbation rate was 2.00 per 1,000 person-years in the overall population and increased based on exacerbation history **(Figure 5)**

Figure 4. Proportion of patients with ≥1 severe exacerbation during follow-up, by baseline exacerbation group

Figure 5. Severe exacerbation rate (per 1,000 person-years) during follow-up, by baseline exacerbation group

Study limitations

There is a possibility of underestimating the number of exacerbations:

- IntegraMédica is an ambulatory center, therefore severe exacerbations are treated in other centers with emergency services so in this study were only captured if they were registered by the treating physician. Severe patients are more likely to remember and report severe exacerbations, which could explain the very high rate of severe exacerbations in the SEV group compared with the NMSE and OME groups
- Exacerbations may also not necessarily have been registered in IntegraMédica due to the free text nature of the electronic medical records use
- The study lacks structured data collection for the evaluation of exacerbations

Independent exacerbation events were defined as those that occurred ≥14 days apart, based on the scientific literature. However, this may be subject to bias, since it assumes a fixed limit for all events

Patients were considered as having COPD by the register of ≥1 COPD-relevant code, which is a criteria with more sensibility than specificity, therefore this study may overestimate the real number of COPD patients as misclassification can occur. Patients with asthma were not excluded, which may have led to misdiagnosis of asthma or COPD

Conclusions

The preliminary results of this large retrospective cohort study indicate that severe exacerbations were more frequent in patients with a history of severe exacerbations in the baseline period, compared with patients with a history of only moderate exacerbations or no moderate or severe exacerbations in the baseline period

Additionally, comorbidities were more frequent in patients with a history of exacerbation

To improve patient health outcomes, strategies with a multisectoral approach should be prioritized as COPD can coexist with, and be aggravated by, other chronic comorbidities

Further studies are warranted that enrich the registry of patients with COPD in Chile and that complement the data from the current study with data from centers with emergency services in order to capture all severe exacerbations

NMSE, no moderate or severe exacerbations; OME, only moderate exacerbations; SEV, ≥1 severe exacerbation.

Disclosures

The authors declare the following real or perceived conflicts of interest in relation to this presentation: FMdS, RS, MC, PJ, and JR are employees of GSK and/or hold stocks/shares in GSK. EAO and JVJV are employees of IntegraMédica and declare no further conflicts of interest. GA is an employee of IntegraMédica and declares participating as Speaker for Abbott, AstraZeneca, Boehringer Ingelheim, and TEVA Saval. GA also declares participating as an investigator in other studies and receiving fees for recruiting patients. LHS is an employee of IntegraMédica and declares receiving fees from AstraZeneca for paid activities. LHS also declares participating as an investigator in other studies and receiving fees for recruiting patients. JAS declares no conflict of interest

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