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(Ex-)smoking asthma patients in general and specialized Belgian practice

M. Decramer [a,*], R. Louis [b], G. Joos [c], P. De Vuyst [d], B. Mast [e], A. Mehuys [e], On behalf of the Pulmonary Advisory Board [f]

[a] *Department of Pneumology, University Hospital Leuven, Herestraat 49, 3000 Leuven, Belgium*
[b] *Pneumology, University of Liège, Avenue de l'Hôpital 13, 4000 Liège 1, Belgium*
[c] *Department of Respiratory Medicine, Ghent University Hospital, De Pintelaan 185, 9000 Gent, Belgium*
[d] *Pneumology, Erasme Hospital, Brussels, Route de Lennik 808, 1070 Brussels, Belgium*
[e] *GSK Pharmaceuticals, Rue du Tilleul 13, 1332 Genval, Belgium*

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KEYWORDS
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Summary
Introduction: Smokers are often excluded from asthma studies. In the present study, data are presented on the prevalence, characteristics and management approach of this patient population in the Belgian practice both at the level of general practitioners (GPs) and specialists.

Abbreviations: ANS, non-smoking asthma patients; AS, (ex-)smoking asthma patient; COPD, chronic obstructive pulmonary disease; FCT, fixed combination treatment; GINA, global initiative for asthma; GOLD, global initiative for chronic obstructive lung disease; GOAL, gaining optimal asthma control; GP, general practitioner; ICS, inhaled corticosteroids; LABA, long-acting bronchodilators; LTRA, leukotriene receptor antagonist; NS, not statistically significant; PCP, primary care physician; PEF, peak expiratory flow rate; SABA, short-acting bronchodilators.

* Corresponding author. Tel.: + 32 16 346807; fax: +32 16 346803.
E-mail address: marc.decramer@uz.kuleuven.ac.be (M. Decramer).

[f] Members of the Advisory Board:

- Prof. P. Germonpré, University Hospital of Antwerp;
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COPD;
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Materials and methods: One hundred and nineteen smoking, non-smoking and ex-smoking patients (25—65 yrs) with asthma, COPD or both, were recruited by 33 GPs and 33 specialists. Data were obtained retrospectively from medical records. However, only a small number of files were complete.

Results: The majority of COPD patients were (ex-)smokers: 94% in the specialist group, 78% in the GP group. Cardiovascular comorbidity appeared in both groups in the same frequency order: COPD > (ex-)smoking patients with asthma (AS) > non-smoking patients with asthma (ANS), with a significant difference between AS and ANS in the specialist population. Chronic cough during more than 3 months in two consecutive years was reported in 97% of COPD patients, in 71% of the AS patients and in only 25% of the ANS patients. The type of cough differed between AS and ANS in the GP group, with a higher prevalence of productive cough in the former. Treatment patterns observed were as expected according to diagnosis except for a disproportionate use of Tiotropium in AS in the GP group.

Conclusion: AS were somewhere in between COPD patients and ANS for a large number of the characteristics studied, suggesting that they are an intermediate phenotype between COPD and asthma.
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Introduction

In Belgium, the prevalence of active smoking varies between 24% and 28%.[1] It is well known that the inhalation of tobacco smoke is harmful to the airways: lung cancer, chronic obstructive pulmonary disease (COPD) and asthma are diseases that are clearly linked to the consumption of tobacco.[2—4] Smoking is associated with an increase in inflammatory cells, increased concentrations of cytokines and structural changes in the bronchial biopsies.[1,5,6]

Smoking is also very common among adults suffering from asthma and tends to mirror the rates found in the general Belgian population.[7] Recently, several studies have been published describing the harmful influence and important interactions of cigarette smoking on asthma.[8—10] Smokers with asthma appear to have more frequent and more severe asthma symptoms, are less likely to have well-controlled asthma, and show a greater health care use compared to non-smoking asthma patients. Smoking alters the natural history of asthma by a modified inflammatory pattern with higher airway and sputum neutrophil counts, an accelerated lung function decline and a more important risk of developing persistent airflow obstruction. Those features may make it difficult to differentiate asthma from COPD, especially in the knowledge that approximately 10—20% of the patients with obstructive lung disease show characteristics of both asthma and COPD. Finally, asthma medications such as inhaled corticosteroids have been found to be less effective in smoking asthma patients compared to non-smoking asthma patients.[1,11,12] Those findings are also accepted by and described in the GINA (global initiative for asthma) and GOLD (global initiative for chronic obstructive lung disease) guidelines for asthma and COPD. The GINA guidelines conclude that smokers are less likely to achieve control and remain at risk of exacerbations.

One of the major problems in the treatment of smoking asthma patients is the lack of efficacy data in this group of patients as smokers have almost always been excluded from studies on asthma due to perceived concerns about recruiting patients with COPD. Instead, we have performed a survey with the aim to determine the prevalence, the characteristics, and the management approach of this very heterogeneous and poorly studied patient population within the Belgian practice, both at the level of the specialist and of the general practitioner (GP).

Materials and methods

This study was conducted by means of diaries in order to collect objective and measurable data (e.g. results from diagnostic tests) contained in medical records from patients suffering from obstructive lung disease. In order to be included, patients had to be between 25 and 65 years old for COPD patients and between 12 and 65 years for asthma patients, and treated with at least one of the following drugs: short-acting bronchodilators (SABA, anticholinergics), long-acting bronchodilators (LABA, anticholinergics), inhaled or oral corticosteroids, antileukotrienes, or a fixed combination of these drugs.

The study ran from January to May 2007. Both GPs and specialists (33 in each group) spread over the country participated in the study. Data were collected in a retrospective manner and were obtained from 191 medical records (Table 1). Patient recruitment was prospective with inclusion of the patient file of the first three successive patients seen during consultation or home visit and responding to the inclusion criteria. A patient file was taken into account for analysis as soon as one of the following diagnoses was given by the GP or specialist involved: asthma, COPD or both (mixed diagnosis). However, only a small number of files were complete, which is reflected in the varying numbers in the results section of this publication. In case of a mixed diagnosis, the patient file was included in the asthma group for analysis. Smoking and ex-smoking asthma patients were included in the smoking asthma patient group. All specialist medical records taken into account for analysis were examined for correlation on the given diagnosis and the results of the diagnostic tests. If these did not match, the patient files were submitted to two independent experts. If they agreed to the same diagnosis, this diagnosis was considered to be correct and final; if not, the diagnosis was considered to be ambiguous and the patient files were included in the analysis according to the initial diagnosis.

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