

Biomass Burning as a Risk Factor for Chronic Obstructive Pulmonary Disease in Spain[☆]



Combustión de biomasa como factor de riesgo para enfermedad pulmonar obstructiva crónica en España

To the Editor,

We enjoyed the article by López-Campos et al., describing the geographical distribution in Spain of additional risk factors, other than smoking, for chronic obstructive pulmonary disease (COPD).¹ We would like to comment on the results obtained in the On-Sint study.² The authors found that male sex was associated with the presence of an additional risk factor other than tobacco smoke, and that exposure to biomass smoke was low (2.6% of COPD cases on average), and lower than occupational exposure to other noxas.

Although biomass combustion is a risk factor of particular relevance in developing countries, exposure to biomass smoke may also be significant in the industrialized world.³ In a study conducted in a predominantly rural population in Spain, biomass combustion exposure was the only risk factor for developing the disease in over 20% of COPD patients referred to a specialist respiratory medicine clinic.⁴ Some aspects of the methodology used by López-Campos et al. suggest that the significance of biomass may be underestimated. The authors state that they did not aim to obtain a sample with a uniform geographical distribution.¹ Most patients were recruited in health centers in urban settings,² where biomass smoke exposure would have not been significant. The association between male sex and an additional risk factor appears to stem from the preponderance of men engaged in jobs that involve occupational exposure to toxins.¹ In contrast, exposure to biomass combustion is higher among women, due to sociocultural determinants.⁴ We would, then, ask the authors for an additional analysis, evaluating exposure to biomass smoke among subjects recruited in rural health centers, and among women.

The study only included smokers, and did not aim to evaluate risk factors in non-smokers, a population in which, globally speaking, biomass combustion exposure is the most significant factor.⁵ Exposure to biomass smoke was self-reported, and the interview began by asking subjects if they had been exposed to any other risk factor apart from tobacco smoke. They were asked to identify the exposure only if the response was positive.¹ In our experience,

many patients are unaware of the potential clinical relevance of biomass burning, and for this reason they may have responded in the negative to the initial question, particularly if exposure was remote, having occurred in childhood or youth, stages when subjects would plausibly be more sensitive to the adverse effects of inhaled toxins.⁴

In short, while the study of López-Campos et al. offers the best data currently available on the distribution of COPD risk factors other than tobacco in Spain, we believe that specific studies are needed to analyze the real significance of biomass combustion as a risk factor for disease in this country, to fulfill the objective proposed by the authors¹: to improve early diagnosis and prevention of COPD.

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Rafael Golpe,* Irene Martín-Robles, Pilar Sanjuán-López

Servicio de Neumología, Hospital Universitario Lucus Augusti, Lugo, Spain

* Corresponding author.

E-mail address: rafagolpe@gmail.com (R. Golpe).

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