

The Importance of Rural Living and Sex in Exposure to Biomass Smoke[☆]



Importancia de la ruralidad y el género en la exposición al humo de combustión de biomasa

To the Editor,

We would like to thank Golpe et al. for their comments on our study on the distribution of additional COPD risk factors other than smoking in Spain.¹ The authors have hit the mark with some of their remarks on the methodology used in the original article.² It is important to place our findings in the context of a retrospective cohort study, with all the noise inherent to this type of design. In the original study, we analyzed the factors associated with exposure to any toxin in addition to tobacco, but we did not make a separate detailed analysis of exposure to smoke from biomass combustion. We agree with the suggestion that our figures probably underestimated the prevalence of exposure to smoke from biomass combustion, and that rural living and sex are 2 factors that can potentially increase exposure to smoke from biomass combustion.

Regarding rural living, the On-Sint study classified participating centers according to their catchment area as rural (5000 inhabitants), semiurban (5000–19 999 inhabitants) and urban ($\geq 20 000$ inhabitants). Only 9.3% of the overall cohort stated that they lived in a rural area, and 15.4% in a semiurban area. When we analyzed the association between these groups and exposure to smoke from biomass combustion, we found a significantly higher percentage ($P=.001$) of exposed cases in rural environments (7.9%), compared to semiurban (4.8%) and urban (1.8%) areas. Curiously, a similar distribution of occupational exposure was also observed.

As for distribution by sex, we found a higher proportion of exposure to smoke from biomass combustion among men (3.0%) compared to women (1.2%), and this was maintained in all regions of the country, except Catalonia, where the ratio was inverted. These data confirm the findings of the original study, i.e., the association of male sex with exposure to any other factor in addition to tobacco in general, and to biomass smoke exclusively.

Despite the significance of occupational exposure and exposure to smoke from the combustion of biomass in COPD, there are 2 reasons why evaluation of these factors together will be challenging. Firstly, this circumstance is not given enough weight in routine history-taking.³ Despite the synergic effect of both exposures (tobacco and biomass or tobacco and occupational exposure),

in our opinion, the cases in which this double exposure is evaluated are so few as to be almost anecdotal. Secondly, there is no consensus on how to quantify accumulated exposure. Fortunately, initiatives aimed at improving methods of estimating this exposure are beginning to emerge.⁴ As our understanding of the different risk factors for the development of chronic bronchial diseases advances, it is of enormous importance for respiratory medicine specialists to start routinely evaluating occupational exposure and exposure to smoke from biomass combustion in all patients in order to provide the most precise and personalized medical care possible.

References

1. Golpe R, Martín-Robles I, Sanjuán-López P. Combustión de biomasa como factor de riesgo para enfermedad pulmonar obstructiva crónica en España. Arch Bronconeumol. 2017;53:289.
2. López-Campos JL, Fernández-Villar A, Calero-Acuna C, Represas-Represas C, López-Ramírez C, Fernández VL, et al., en nombre de los investigadores del estudio On-Sint. Occupational and biomass exposure in chronic obstructive pulmonary disease: results of a cross-sectional analysis of the On-Sint study. Arch Bronconeumol. 2017;53:7–12 [Article in English, Spanish].
3. López-Campos JL, Abad Arranz M, Calero-Acuna C, Romero-Valero F, Ayerbe-García R, Hidalgo-Molina A, et al. Guideline adherence in outpatient clinics for chronic obstructive pulmonary disease: results from a clinical audit. PLoS One. 2016;11:e0151896.
4. Mahesh PA, Jayaraj BS, Prabhakar AK, Chaya SK, Vijaysimha R. Identification of a threshold for biomass exposure index for chronic bronchitis in rural women of Mysore district, Karnataka, India. Indian J Med Res. 2013;137:87–94.

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