Reviewer’s report

Title: Prevalence and characteristics of COPD among pneumoconiosis patients at an occupational disease prevention institute: A cross-sectional study

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Reviewer: Grzegorz Brozek

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Prevalence and characteristics of COPD among pneumoconiosis patients at an occupational disease prevention institute: A cross-sectional study

The manuscript by Peng et al. "Prevalence and characteristics of COPD among pneumoconiosis patients at an occupational disease prevention institute: A cross-sectional study" focuses on the co-existence of COPD with pneumoconiosis. In brief, the authors conclude that "Pneumoconiosis patients are at a high risk of COPD, pneumoconiosis patients with COPD may suffer more severe respiratory symptoms like wheeze and dyspnea than patients without COPD. The high category of pneumoconiosis, old age, wheeze symptom, and low BMI are associated with an increased risk of this combination." (what combination? Wheeze with "wheeze and dyspnea"). As independent determinants of COPD were identified: pneumoconiosis category, wheeze, reduction in BMI and age.

In general, the message from the research as well as the whole analysis is for me unclear and unconvincing. Compared groups pneumoconiosis vs. pneumoconiosis+COPD differed statistically significant in case of age, pneumoconiosis category, exposure time, engagement in air drills, BMI, airflow limitation, diffusion, symptoms severity score. When is already known that: age and smoking are independent, undisputed risk factors of COPD; age and exposure time are risk factors for pneumoconiosis; and airflow limitations and respiratory symptoms are manifestations of pneumoconiosis and COPD, the analysis should be done as stratified or any other way controlled for potential confounders. In such case as invariable as well as multivariable analysis results may be misleading. I'm afraid that age and smoking differences are responsible for described co-existence of pneumoconiosis and COPD. Even if the results are unbiased in the discussion section I found arguments rather against as explaining the phenomenon.

Minor comments:

1. The authors formulate difficult to understand phrases. Like referred to above line from the summary about "the combination" or into the Discussion: "Longitudinal studies have shown that exposure to coal dust has a rapidly decreasing effect on FEV1, independent of cigarette smoking [22], and cigarette consumption had no independent effects on lung function [23]." Do they really claim that cigarette consumption has no independent effects on lung function? Really?
2. If study was performed between December 1st, 2015 to December 1st, 2016 how possible that "The diagnosis of COPD was performed according to the GOLD 2017 guideline"

3. What was alpha level?

4. Page 10/19 it is not a cohort!

5. In light of the presented results I failed to substantiate the conclusion claim "a routine assessment of lung function and detailed respiratory symptoms evaluation is necessary for timely and adequate clinical management. The identification of these different risk factors advances a new perspective for more effective screening and prevention of COPD in pneumoconiosis"

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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