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Chronic obstructive pulmonary disease in Poland — a need for population-based epidemiological studies

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A recent monograph „Lung Diseases” issued by the National Medical Publisher (PZWL) in relation with the XXIV Conference of the Polish Thoracic Society (Wisła, May 7–10, 2016) includes a number of state-of-art papers addressing key pulmonological issues. The topic of its first article is asthma and chronic obstructive pulmonary disease (COPD) [1]. The contents of this paper has triggered our interest and concern regarding epidemiological aspects of the diseases covered in this communication. In particular we paid attention to the paragraph on epidemiology of COPD because — to our knowledge — there is a need to obtain reliable estimates of the occurrence of this disease in the Polish population and this need is more apparent when confronted with epidemiological data on COPD available in many countries.

The quoted article concludes that in Poland, in men and women aged 40 years or more, the prevalence of COPD is 10%. Such an estimate places a risk on the upper margin of a range 5–10% that was derived from more than 100 studies on COPD, performed in many countries since the 70ties, XX century [2].

It is of importance that the quoted figure reflects — for the Polish population — the findings obtained in 526 inhabitants of the Kraków region who were examined more that 10 years ago within the Polish section of the BOLD project, and that the case definition was based on the GOLD

classification (stage ≥ 2) [3]. Similar level of the occurrence of COPD (10.7% in subjects aged 40 years or more) was found in an earlier study including 676 inhabitants of Warszawa [4]. Another study performed in the town of Zabrze among 559 people aged 19–69 years showed the presence of COPD in 13.9% of men and 7.2% of women [5]. Two latter projects used GOLD recommendations to diagnose COPD and their results were published between 2002 and 2003. Other more recent Polish studies on COPD mostly deal with clinical manifestation of the disease or report on its occurrence among patients registered with family practice centers [6, 7]. One of those studies revealed the frequency of COPD of 12.8% among men and 7.1% among women, aged 40 years or more [10], however the figures provide a poor estimate of the population-based prevalence of COPD due to methodological circumstances. The currently published study, aiming at the clinical manifestation of asthma and COPD, included 15973 patients registered with many family practice centers in Poland and showed that 20.0% of men and women had COPD, diagnosed according to GOLD recommendations [8]. Again, the figure cannot be used as a reliable estimate because investigation into the prevalence of COPD was not a goal of the study.

Results of our questionnaire survey on respiratory diseases performed within GA2LEN project in the town of Chorzow in 2008 and including

2800 subjects aged 15–75 years showed that in the age group 40 years or more 5.2% of men and 3.3% of women had COPD ever diagnosed by physician [Unpublished report – Department of Epidemiology, Medical University of Silesia]. On the other hand, in this age group, 12.1% of men and 12.9% of women had — in the past — diagnosis of asthmatic or spastic chronic bronchitis. In the age group 60 years or more 7.2% of men and 3.3% of women had COPD diagnosed by physician and 13.4% of men and 15.4% of women had asthmatic/spastic chronic bronchitis ever diagnosed by physician. The survey protocol does not allow to infer on population-based magnitude of the problem but the findings are in line with a view on underdiagnosis of COPD in many countries, in Poland even reaching 80% [7, 9].

A need for better evidence on epidemiology, etiopathogenesis and clinical aspects of COPD in the countries of Eastern Europe is clearly recommended in a European Lung White Book [2]. Such studies are necessary to address not only epidemiological questions but also other important points, such as phenotypes of COPD and contributions from the field of biomarkers, modern molecular and genetic tools or novel imaging techniques [2].

The obvious need to obtain reliable estimates concerning prevalence and phenotypes of COPD in Poland can be only met by a full-scale epidemiological project implemented according to a good epidemiology practice. Such studies in adults are difficult and the crucial points are representativeness of the study groups and participation rate, at least at the first stage of the project [10]. The data briefly reviewed in our communication prove a need for preparation and implementation of a large nation-wide study on

COPD in Poland, involving perhaps a cross-sectional assessment in the first phase and a cohort approach as its continuation. Such a study would serve a number of goals, from scientific assessment of the problem to much needed enforcement of scientific activities of the whole respiratory society and to promotion of its role and visibility on the international scene.

Conflict of interest

The authors declare no conflict of interest.

References:

1. Domagała-Kulawik J. Astma i przewlekła obturacyjna choroba płuc. *Choroby Płuc, PZWL Warszawa* 2016; 6–9.
2. European Lung White Book. <http://www.erswhitebook.org/chapters/chronic-obstructive-pulmonary-disease>; 07.07.2016.
3. Niżankowska-Mogilnicka E, Mejza F, Buist AS *et al.* Prevalence of COPD and tobacco smoking in Malopolska region — results from the BOLD study in Poland. *Pol Arch Med Wewn* 2007; 117: 402–410.
4. Pływaczewski R, Bednarek M, Jończak L, Zieliński J. Częstość występowania POChP wśród mieszkańców prawobrzeżnej Warszawy. *Pneumonol Alergol Pol* 2003; 71: 329–335.
5. Niepsuj G, Kozielski J, Niepsuj K *et al.* Przewlekła obturacyjna choroba płuc u mieszkańców miasta Zabrze. *Wiad Lek* 2002; 55 (Suppl. 1): 354–359.
6. Wesołowski S, Boros PW, Dębowski T. Chronic obstructive pulmonary disease in Poland: distribution of patients according to the new Gold 2011 classification. Cross-sectional survey. *Pneumonol Alergol Pol* 2014; 82: 511–517.
7. Bednarek M, Maciejewski J, Woźniak M, Kuca P, Zieliński J. Prevalence, severity and underdiagnosis of COPD in the primary care setting. *Thorax* 2008; 63: 402–407.
8. Bożek A, Rogala B, Bednarski P. Asthma, COPD and comorbidities in elderly people. *J Asthma* 2016. doi:10.3109/0277090.2016.1170139.
9. Pena VS, Miravites M, Gabriel R *et al.* Geographic variations in prevalence and underdiagnosis of COPD: results of IBERPOC multicentre epidemiological study. *Chest* 2000; 118: 891–999.
10. Bakke PS, Rönmark E, Eagen T *et al.* Recommendations for epidemiological studies on COPD. *Eur Respir J* 2011; 38: 1261–1277.