

THE DEMOGRAPHIC PROFILE OF NEVER-SMOKERS WITH COPD

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Abstract: Chronic Obstructive Pulmonary Disease (COPD) currently represents a major public health problem throughout the world. Most of the research that has been done on COPD blamed almost exclusively cigarette smoking for the development of the disease. However, in real life, there are numerous patients with COPD that are never-smokers. A low suspicion index makes diagnosing COPD a real problem in this population and severely underestimates its incidence. The current study wishes to paint a demographic image of the non-smoker COPD patient in Vâlcea county in order to raise a flag for this often missed diagnosis. In the studied population, we observed a predominance of the female gender and the low educational status. Most patients live in the rural environment and use biomass as the primary heating source.

Cuvinte cheie: BPOC, nefumător, biomasă, mediu rural

Rezumat: BPOC reprezintă una din problemele de sănătate publică importante ale lumii. Majoritatea cercetării curente în domeniul BPOC incriminează fumatul ca principal factor de risc însă, în practică, există numeroși pacienți care întrunesc criteriile de diagnostic pentru BPOC fără a fi fumători. Pragul scăzut de suspiciune face diagnosticul acestora dificil și incidența reală a bolii este subestimată la această categorie. Studiul de față se dorește o radiografie a BPOC la nefumător în județul Vâlcea menită a atrage atenția asupra acestui diagnostic deseori neglijat. În rândul acestor pacienți se observa o predominanță a sexului feminin și a domiciliului în mediul rural. De asemenea observăm o prevalență crescută a arderii de biomasă precum și nivel educațional scăzut.

INTRODUCTION

According to the latest published trials, almost a quarter of all COPD cases in countries such as the USA (1), the United Kingdom (2) or Spain (3) are registered in never-smokers, although there are trials which place their incidence around about 48% of all COPD cases.(4) COPD in the never-smoker patient represents a problem mainly because of the low suspicion index, since the disease is described to appear almost exclusively in the smoking population. Also, the prevalence of using biomass for heating and cooking, the main risk factor for COPD for the never-smoker is about 3 times bigger in the world population than that of cigarette smoking. All this taken in consideration, most clinical trials that study novel therapies for COPD are recruiting exclusively smokers or former smokers. The aim of the current study is to outline the demographic profile of the never-smoker COPD patient in order to raise the suspicion index for this clinical entity

PURPOSE

The current study wishes to paint a demographic image of the non-smoker COPD patient in Vâlcea county, in order to raise a flag for this often missed diagnosis.

METHODS

We chose to conduct a descriptive, retrospective study on the never-smokers diagnosed with COPD according to the GOLD guidelines who visited the Pulmonology Ambulatory of Râmnicu Vâlcea between 2009 and 2010. Patients with a clinical diagnosis of asthma, with symptom variability not associated with infection, with a history of wheezing, dyspnoea

or allergies were excluded. Also, patients with lower respiratory tract infections, significant bronchiectasis, intestinal inflammatory disease, rheumatoid arthritis and thoracic wall deformities were considered exclusion criteria due to their impact with airflow limitation. A number of 85 patients who met the inclusion criteria and had none of the exclusion criteria were selected.

RESULTS AND DISCUSSIONS

The mean age of the studied group was 69 years old, with an incidence peak in the 70-80years of age group (figure 1). The differences of the mean age between genders were insignificant. When the living environment was taken in consideration, a significant difference was observed between rural and urban mean age – 72.02years respectively 65.47 years, a difference that can be correlated with the ageing tendency of the rural population.

The majority of the studied patients – 63.5 % (n=54) were female. Of these, 65.4% lived in rural areas and 71% had graduated primary school. Of the studied male patients (n=31), 61.2% lived in rural areas and only 48% had only graduated primary school. We can observe the predominance of females, traditionally unaffected by the smoking habits, especially in the conservative rural communities.

Of the whole studied population, 64.7 % (n=55) lived in rural areas. 52.7% of the rural patients had occupational exposure to noxious gases and particulate matter such as silica, aromatic hydrocarbons, dust or extreme weather conditions. 49.5% of the entire group had occupational exposure. The percent of never-smokers with COPD living in rural areas is

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superior to that of the percentage of the general population living in rural conditions (50.5%). Taking into consideration that the vast majority of the rural population uses biomass products for heating, exposure to biomass smoke may constitute the single most important risk factor for COPD for these patients.

Figure no. 1. Age histogram of never smokers with COPD

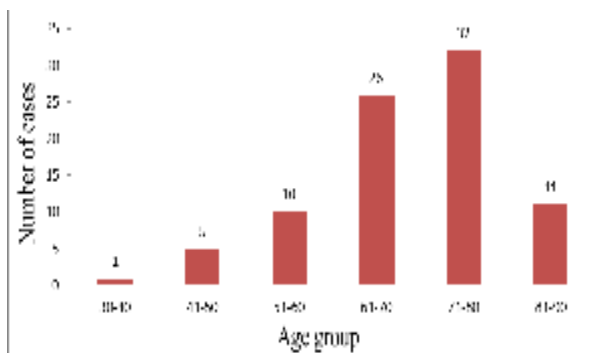
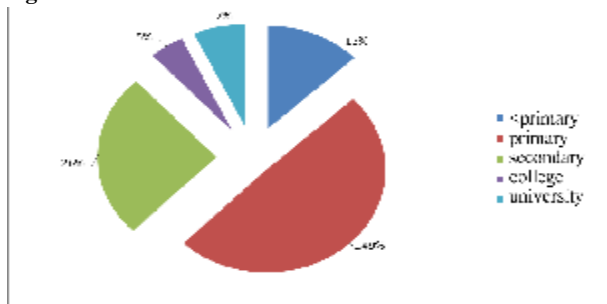
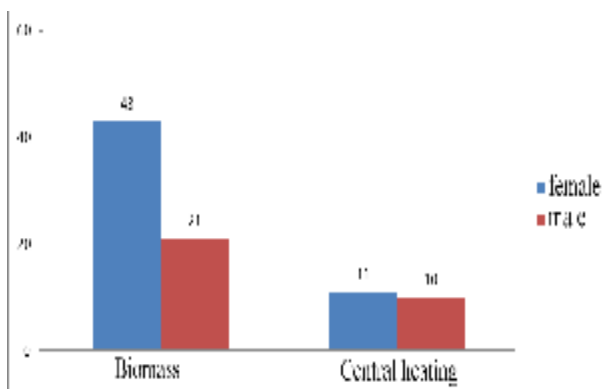


Figure no. 2. Educational level of never smokers with COPD



Regarding the educational status of the patients, we observed that 12.5% had not graduated primary school, 49.5% had graduated only primary school and only 37.6% had graduated either secondary school or college. Of the female population, 16.7% had not graduated primary school while only 6.4% of the male patients had not graduated the primary school cycle. 72% of patients with low educational status were exposed to occupational risk factors for COPD. 20% of the COPD patients with cardiovascular comorbidities had not graduated primary school (figure 2). We can observe the association between the low educational status and the unqualified labour which exposes the workers to unfavourable conditions.(5)

Figure no. 3. Sex distribution of heating sources in never-smokers with COPD



CONCLUSIONS

The described data allows us to describe the demographic profile of the never-smoker COPD patients living

in the county of Vâlcea. This patient has a mean age of 69 years old, lives in a rural community and is most likely female. The last graduated educational cycle is most often the primary cycle. Burning biomass for cooking and heating is present in more than three quarters of the studied group, remaining the main risk factor for COPD for the never smoker patient.

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