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### MEDICAL DATA ON COPD

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The aim of the present study is to highlight the seasonal cases diagnosed with chronic obstructive pulmonary disease, present in the specialized medical service with acute symptomatology. In order to establish a more accurate diagnosis, besides the specialized medical examination, paraclinical investigations such as standard pulmonary radiography and spirometry, were used.

*Key words:* COPD, investigations, standard pulmonary radiography, spirometry

Chronic obstructive pulmonary disease (COPD) mainly includes three related respiratory diseases, namely chronic bronchitis, chronic asthma and pulmonary emphysema [2]. In each of the aforementioned conditions, there is a degree of chronic obstruction in the passage of airflow through the airways and through the lungs [1]. This obstruction is generally permanent and may be progressive in the course of years [3]. The factors that lead to signs and symptoms of COPD are smoking, pollutants, and genetic factors [4, 12]. According to statistical data from the world, active smoking is considered to be the first cause responsible for the occurrence of COPD cases [8]. In context, active smoking is an incriminated factor in the occurrence of obstructive pulmonary diseases, especially in children [10]. From this point of view, studies have shown that smoking affects the lungs in many ways [11]. One example, refers to the irritating effect of cigarette smoke that attracts cells that cause inflammation [6, 13]. In the context, cigarette smoke stimulates inflammatory cells to release elastase, which breaks elastic fibers from lung tissue [7, 15]. From this point of view, it is known that the normal functioning of the lungs is dependent on the elastic fibers, which are found both around the airway and in the alveolar walls and which are constituted of elastin [16]. In smokers, elastase is increased and can break down elastin [9]. Last but not least, the genetic component incriminated in COPD should be mentioned. From this point of view, as a result of studies, it is known as the deficiency of antitrypsin alfa-1 (AAT). Specialty scientific data has shown that AAT deficiency is caused by a rare genetic inheritance. Antitrypsin alfa-1 is produced at the liver, its production being controlled by inherited genes. In this idea, and as a result of research in the field, it is known that each person has two AAT genes, one from each parent. As a result, human subjects

who inherit two AAT-defective genes, respectively one from each parent, as mentioned above, have small amounts of AAT. The results of research in the field also showed that people with a normal and defective gene have lower AAT than normal, but higher than those with two defective genes [5]. Factors inherited in the installation of COPD, as previously mentioned, as well as the seasonal aspects that raise the number of acutely diagnosed cases with COPD, lead to the investigation of pathology and of patients present at the doctor in acute phase [14].

### MATERIALS AND METHODS

Statistical data were selected for patients who presented themselves in the specialty service with acute symptomatology. Because COPD exacerbations are common during cold and hot passages and from hot to cold, certain days of the week were considered as the peak of symptomatic patients. The data error may be very low.

### RESULTS AND DISCUSSION

The figure below shows the number of acute patients by gender and by the home environment.

Data from the first part of May show that male gender is predisposed to COPD as compared to female gender, given the factors incriminated in the installation of signs and symptoms of the disease (fig. 1 – 4). All patients included in this study live in the urban home environment (fig. 1 – 6).

After the selection of the days selected as representative for May, the below will display dates with selected days from October. It is envisaged observing the fluctuation of the patients in the days considered as peak activity in the specialized ambulatory (fig. 4 – 6).

The decline in COPD incidence in rural areas is probably due to the extremely low or no pollution of the air and the pollutants in the home environment.

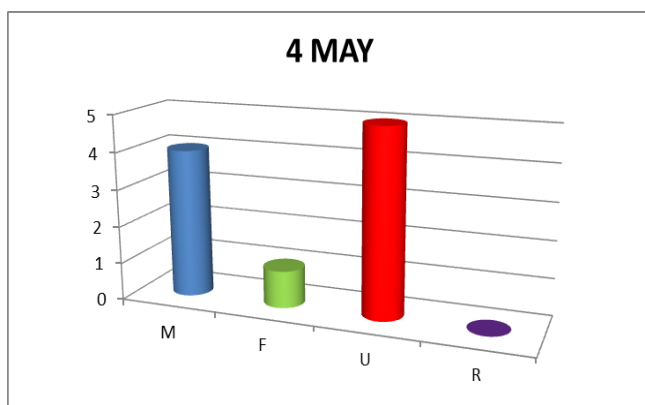


Figure 1 – Number of acute patients by gender and by the home environment on May, 4

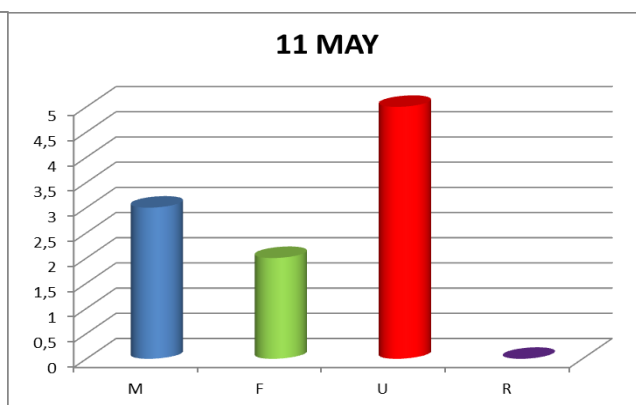


Figure 2 – Number of acute patients by gender and by the home environment on May, 11

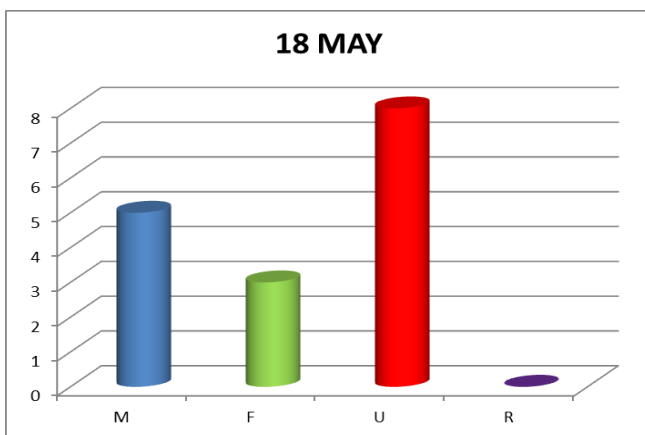


Figure 3 – Number of acute patients by gender and by the home environment on May, 18

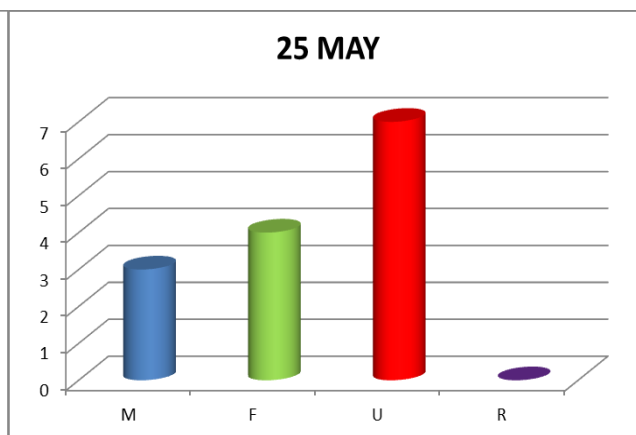


Figure 4 – Number of acute patients by gender and by the home environment on May, 25

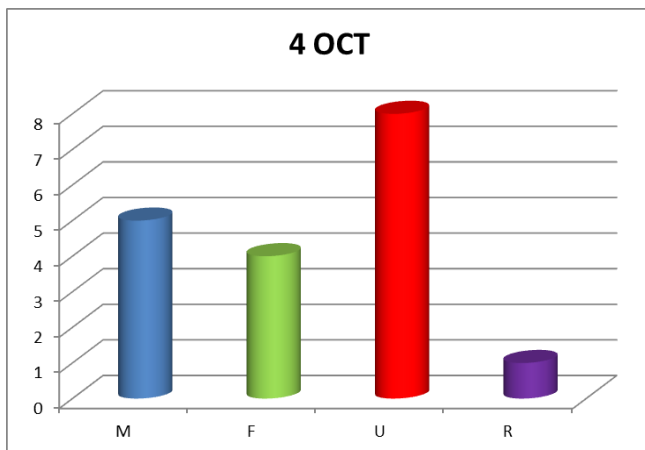


Figure 5 – Number of acute patients by gender and by the home environment on October, 4

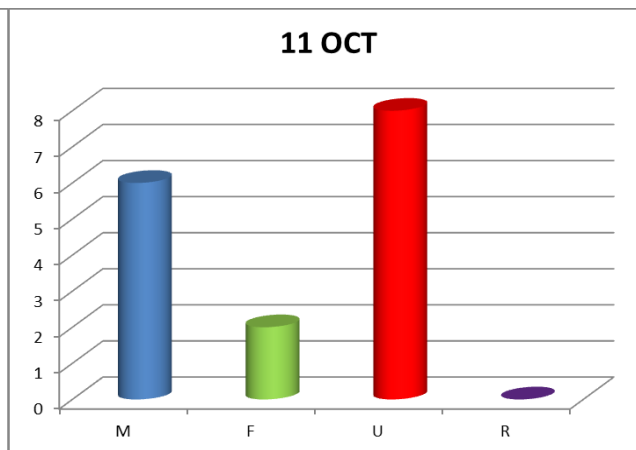


Figure 6 – Number of acute patients by gender and by the home environment on October, 11

From data tables in the first half of October, there are a number of acute patients, numerically more male patients compared to females. The home environment of both genders is predominantly from urban residence area (fig. 5 – 6). Although there is a higher incidence of female COPD in the previous table, no statement can be

made that the October month would be a risk for exacerbating the symptoms of COPD in female gender (fig. 7). In the context, the data presented are purely indicative.

Patients in the second half of October, selected for this study, are also predominantly male, with only minor exceptions, as reported in

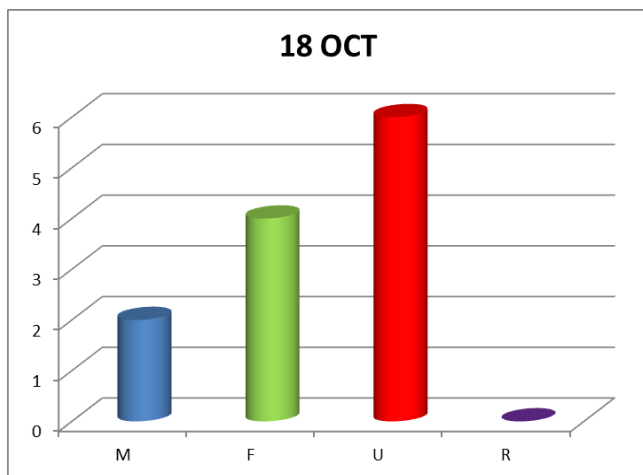


Figure 7 – Number of acute patients by gender and by the home environment on October, 18

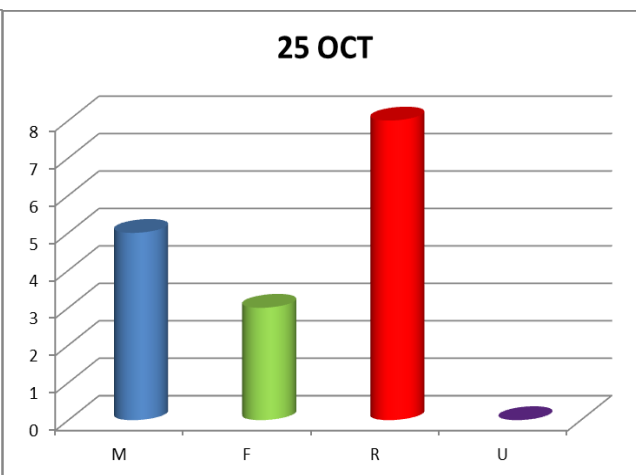


Figure 8 – Number of acute patients by gender and by the home environment on October, 25

the Specialty Medical Service (fig. 7 – 8). The home environment for both genders included in the study is also urban. These data confirm the increased incidence of COPD in the urban area compared to rural home environment (fig. 1 – 8).

**CONCLUSION**

1. COPD is a complex pathology that allows analysis from different medical perspectives. COPD allows for the performance of both statistical surveys and analyzes of paraclinical investigations.

2. COPD allows comparative morphological observation, primarily structural. The ones mentioned as conclusions can be the topic of studies of interest in future articles.

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*МЕДИЦИНСКИЕ АСПЕКТЫ ИССЛЕДОВАНИЯ ХОБЛ*

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Целью представленного исследования явилось выявление сезонных случаев хронической обструктивной болезни легких с острой симптоматикой в отделениях специализированной медицинской службы. Для установления более точного диагноза, помимо специализированного медицинского осмотра, использовались параклинические исследования, такие как стандартная легочная рентгенография и спирометрия.

*Ключевые слова:* ХОБЛ, исследования, стандартная легочная рентгенография, спирометрия

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*ӨКПЕНІҢ СОЗЫЛМАЛЫ ОБСТРУКТИВТІ АУРУЫНЫҢ МЕДИЦИНАЛЫҚ АСПЕКТІЛЕРІ*

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Ұсынылған зерттеудің мақсаты арнайы медициналық қызметте өкпенің созылмалы обструктивтік ауруының маусымдық жағдайларын өткір симптоматикамен анықтау болып табылады. Барынша дәл диагноз қою мақсатында, арнайы медициналық тексерумен қатар, стандартты өкпе рентгенографиясы мен спирометрия сияқты параклиникалық зерттеулер қолданылған.

*Кілт сөздер:* өкпенің созылмалы обструктивті ауруы, зерттеулер, стандартты өкпе рентгенографиясы, спирометрия