

A. Chesca¹, T. Sandle², A. S. Akhayeva³, A. B. Marchenko³

MEDICAL DATA ON COPD

¹Transilvania University of Braşov, Clinical Hospital of Pneumophthisiology (Braşov, Romania),

²University of Manchester (United Kingdom),

³Karaganda State Medical University (Republic of Kazakhstan)

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.

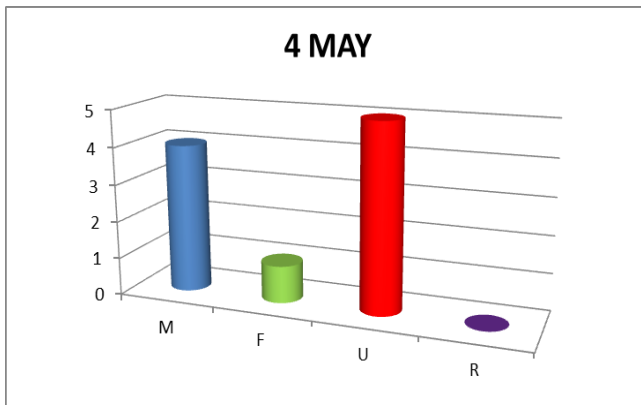


Figure 1 – Number of acute patients by gender and by the home environment on May, 4

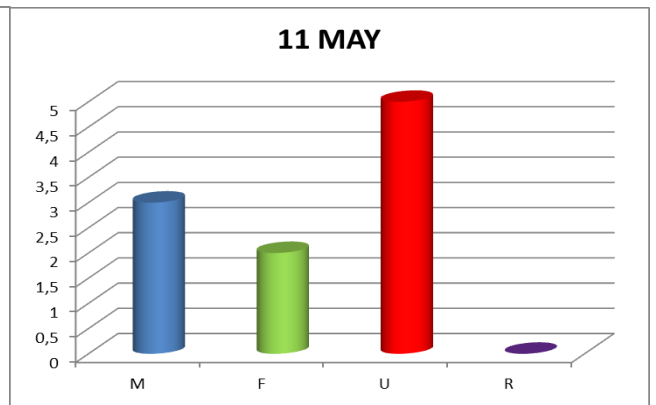


Figure 2 – Number of acute patients by gender and by the home environment on May, 11

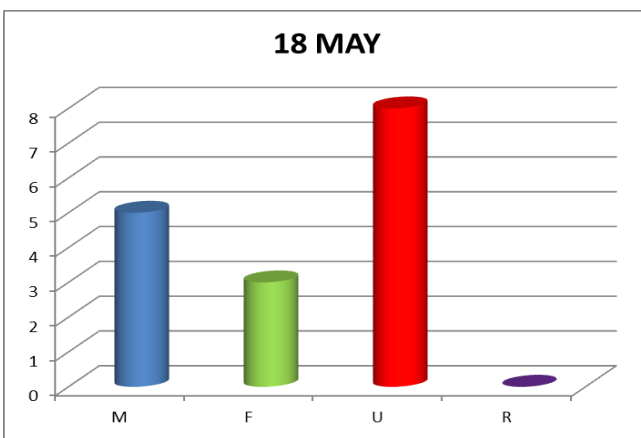


Figure 3 – Number of acute patients by gender and by the home environment on May, 18

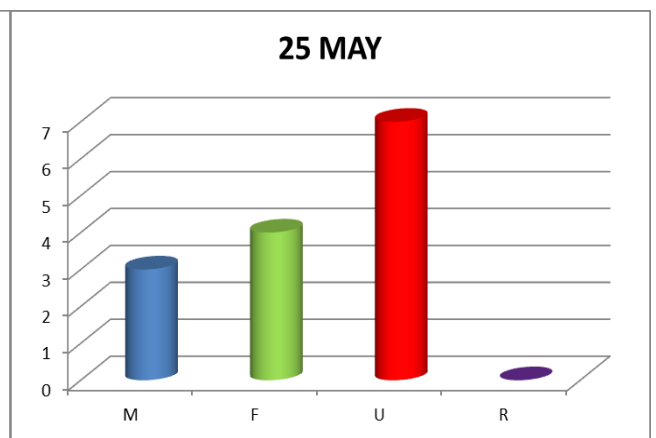


Figure 4 – Number of acute patients by gender and by the home environment on May, 25

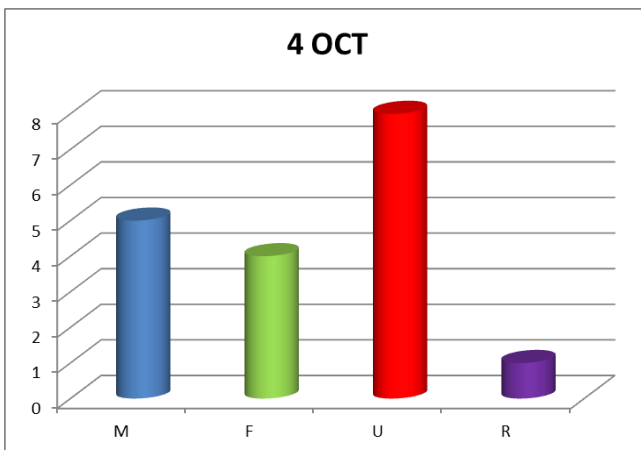


Figure 5 – Number of acute patients by gender and by the home environment on October, 4

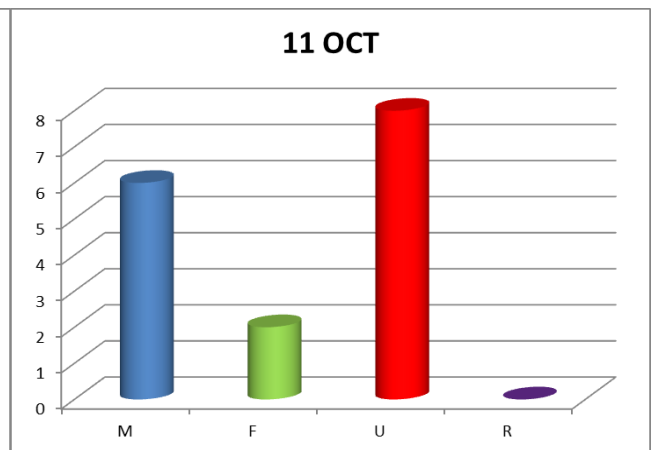


Figure 6 – Number of acute patients by gender and by the home environment on October, 11

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

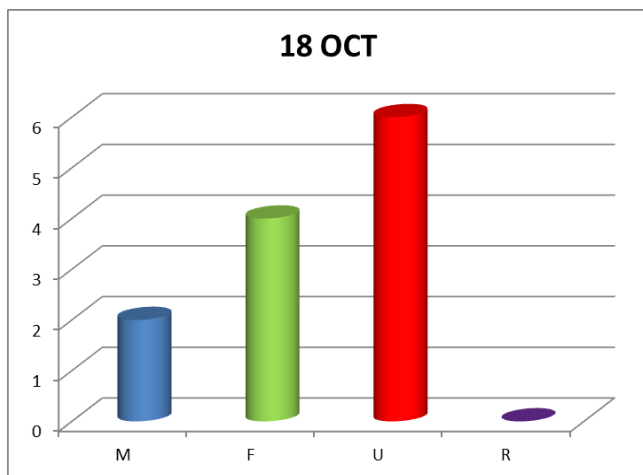


Figure 7 – Number of acute patients by gender and by the home environment on October, 18

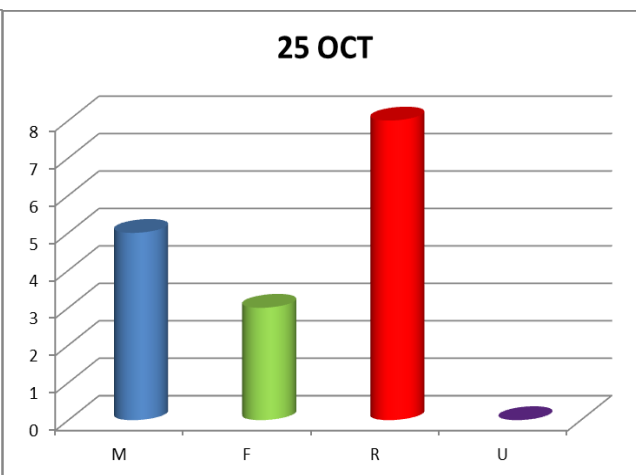


Figure 8 – Number of acute patients by gender and by the home environment on October, 25

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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А. Ческа¹, Т. Сэндл², А. С. Ахаева³, А. Б. Марченко³
МЕДИЦИНСКИЕ АСПЕКТЫ ИССЛЕДОВАНИЯ ХОБЛ

¹Университет Трансильвании г. Брашов, Клинический госпиталь фтизиатрии (г. Брашов, Румыния),

²Университет Манчестера (Великобритания), ³Карагандинский государственный медицинский университет (Караганда, Казахстан)

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

А. Ческа¹, Т. Сэндл², А. С. Ахаева³, А. Б. Марченко³

ӨКПЕНІҢ СОЗЫЛМАЛЫ ОБСТРУКТИВТІ АУРУЫНЫҢ МЕДИЦИНАЛЫҚ АСПЕКТІЛЕРІ

¹Трансильвания университеті, Брашов қаласы, Клиникалық фтизиатрия госпиталі (Брашов қаласы, Румыния),

²Манчестер университеті (Ұлыбритания), ³Қарағанды мемлекеттік медицина университеті (Қарағанды, Қазақстан)

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

A. Chesca¹, A. B. Marchenko², A. S. Akhaeva²

STUDY OF PATIENTS WITH ACUTE RESPIRATORY PATHOLOGY WITH PACEMAKER IMPLANT

¹Transilvania University of Braşov, Clinical Hospital of Pneumophysiology (Braşov, Romania),

²Karaganda state medical university (Republic of Kazakhstan)

Currently, cardiovascular and bronchopulmonary pathologies are the most urgent medical and social problems, in connection with maintaining a high level of mortality and morbidity. The present paper aims to bring attention to selected cases of patients who have carried out medical examination of acute respiratory symptomatology. Selected patients for the present study have comorbidities, acute and/or flare-up of chronic respiratory diseases and cardiovascular diseases requiring a pacemaker implant. Following routine investigations, including standard chest x-ray and anamnesis, had shown the combination of respiratory and cardiac symptomatology. This study also increased awareness of their condition, risks in patients with these diseases.

Key words: X-ray imaging, respiratory pathology, cardiovascular diseases, pacemaker

Respiratory pathology, by various symptoms worsen the quality of life and guide patients to medical specialized examinations [3, 12, 13]. In many situations, respiratory diseases affect patients of vulnerable ages, which contact with viruses, bacteria or fungi, that affect different segments of the upper airway or the lungs [8, 14].

Frequently, in all seasons of the year, but especially in the cold season, patients with cardiovascular disease are present in specialized departments with pneumophysiological profile [6]. We draw attention to elderly patients of both genders, who at the standard chest x-ray imaging investigation have present a pacemaker [1, 2]. Situations leading to the pacemaker implant are certain types of atrioventricular blocks, atrial fibrillation, carotid sinus hypersensitivity syndrome, sinus bradyarrhythmia, sinus node diseases [10, 15]. Artificial medical pacemaker is a device that uses electrical impulses, leading to myocardial function within normal limits, with a sustained, regular, rhythm of contraction capacity [7, 11].

In our practice such patients, are still relatively rare, in this regard, we pay them more attention. Radiological observation of the pacemaker, requires at least taking an anamnesis of the patient's cardiovascular disease associated with acute respiratory symptomatology [5, 9].

Aim of research was to improve diagnosis, medical awareness and adherence to therapy of patients with acute or chronic respiratory pathology with chronic cardiovascular diseases requiring a pacemaker implant.

MATERIALS AND METHODS

In order to obtain this material, were selected patients, who have been presented for pneumological consultation and who have described associated cardiovascular disease in their anamnesis and being carriers of the pacemaker.

The patient's gender, age, home environment, diagnostic features of cardiovascular and respiratory diseases are considered. All patients from the present study were from urban residence area. The study involved 14 people, 78.57% (n=11) men and 21.43% (n=3) women. All examined were divided into two groups. First group was surveyed in the second quarter of 2016, 83.33% (n=5) men and 16.67% (n=1) female, the second group in the third quarter of the same year, 75% (n=6) men and 25% (n=2). In routine examinations such as standard chest X-ray, a pacemaker implant was observed at all patients.

RESULTS AND DISCUSSION

The results of distribution of patients by gender showed on the figures 1, 2, 3. As shown in the diagram, there is a prevalence of male to female in general number of patients and in both groups. Differences in distribution between the two groups were not significant.

The predominance of men in the study reflects the fact that male sex is one of the main, unmodified risk factors for the development of cardiovascular diseases and their complications. It is also noted, that the male population has a higher percentage of smokers, which also increases cardiovascular risk and in particular the risk of developing persistent arrhythmias requiring the installation of a pacemaker [4].

The result of the sample distribution by age group is shown in Table 1. All patients were divided into 6 age groups with an interval of 9 years.

The most common age group, which is represented in the study, was a group of patients from 61 to 70 years, mainly due to the male population. In the second place were patients of the group <50 years old, with a uniform distribution across the sex.

Cardiovascular diseases from the selected

Table 1 – Sample distribution by age group

Age group, years	< 50	51-60	61-70	71-80	81-90	< 90
General population						
Cases, n (%)	2 (14.29)	1 (7.14)	8 (57.14)	1 (7.14)	1 (7.14)	1 (7.14)
Male population						
Cases, n (%)	1 (9.1)	1 (9.1)	7 (63.63)	1 (9.1)	0 (0)	1 (9.1)
Female population						
Cases, n (%)	1 (33.33)	0 (0)	1 (33.33)	0 (0)	1 (33.33)	0 (0)

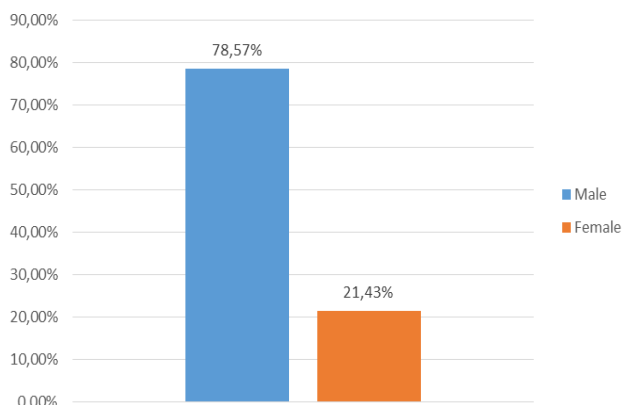


Figure 1 – Distribution of patients by gender, in both groups

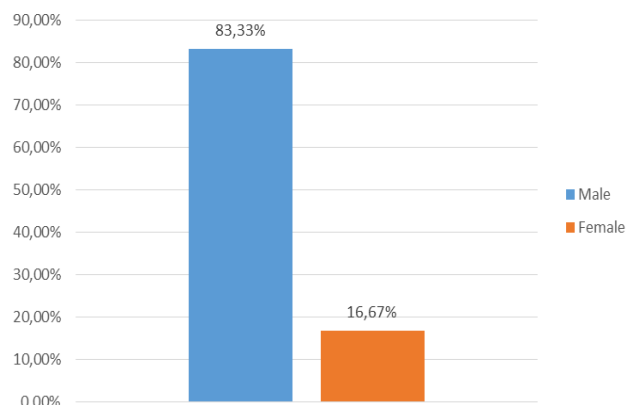


Figure 2 – Distribution of patients by gender, group 1

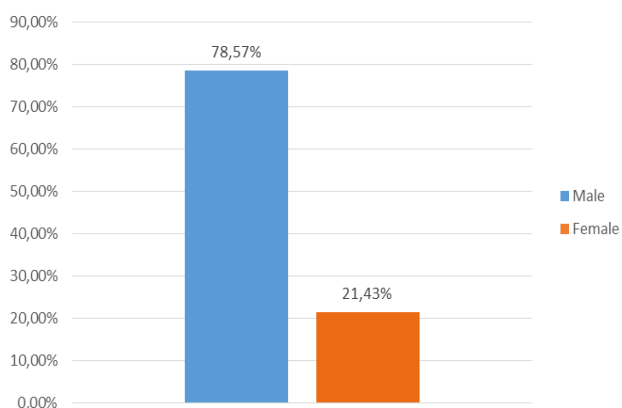


Figure 3 – Distribution of patients by gender, group 2

patients of the study were bundle branch block, sinus node disease, myocardial infarction, valvulopathy, heart failure; for example in one decompensated case, male patient 96 years old, was diagnosed pleural effusion.

The study continued, but in the manner of presenting suggestive radiological images (fig. 1, 2). Considering that the male gender is more affected than female gender, standard chest X-ray will be shown in two symptomatic patients with respiratory signs and symptoms, presented in specialized medical services, in the first quarter of

2018. The study could be continued from different perspectives.

CONCLUSION

The combination of bronchopulmonary pathology with cardiovascular diseases, in particular, with heart rhythm disorders requiring the implantation of a pacemaker, significantly increases the risk of nonfatal (main disease prognosis worsening) and fatal complications such as a heart attack, stroke and pulmonary embolism. This, in turn, increases the importance of timely diagnosis and pathogenetic treatment of pulmonological pathology, consultation of pulmonologist. With each of the examined patients, was hold a conversation on the need for timely consultation with related specialists, recommendations for further examination and treatment are detailed.

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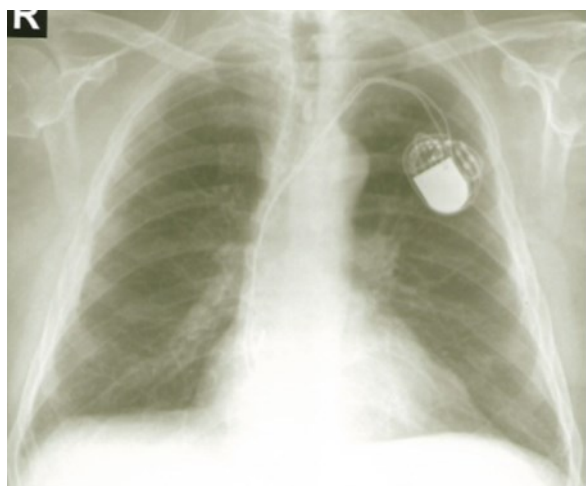


Figure 4 – Male, 84 years old

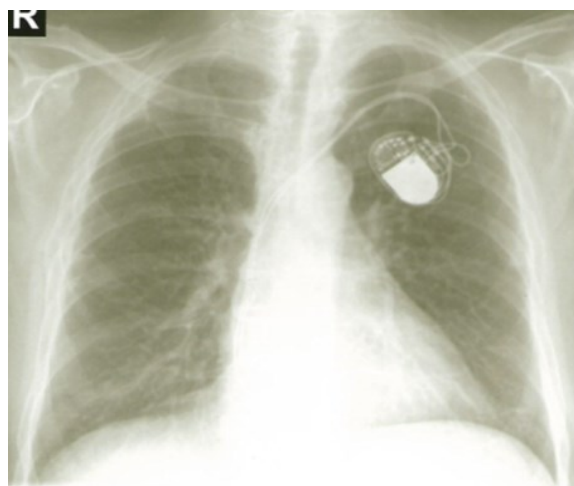


Figure 5 – Male, 74 years old

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А. Ческа¹, А. Б. Марченко², А. С. Ахаева²

ВЕДЕНИЕ ПАЦИЕНТОВ С ОСТРОЙ РЕСПИРАТОРНОЙ ПАТОЛОГИЕЙ И КАРДИОСТИМУЛЯТОРОМ

¹ Университет Трансильвании г. Брашов, Клинический госпиталь фтизиатрии (г. Брашов, Румыния),

² Карагандинский государственный медицинский университет (Караганда, Казахстан)

В настоящее время сердечно-сосудистая и бронхолегочная патология являются наиболее неотложными медицинскими и социальными проблемами в связи с высоким уровнем смертности и заболеваемости. Представ-

ленная работа направлена на привлечение внимания к отдельным случаям ведения пациентов, которым было проведено медицинское обследование острой респираторной симптоматики. Отобранные для исследования пациенты имели сопутствующие заболевания, острое и/или внезапно начавшееся хроническое респираторное заболевание и сердечно-сосудистые заболевания, требующие использования кардиостимулятора. После рутинных исследований, которые включали в себя стандартную рентгенографию и анамнез грудной клетки, была выявлена комбинация респираторной и сердечной симптоматики. Настоящее исследование также повысило осведомленность состояния, рисках у пациентов с этими заболеваниями.

Ключевые слова: рентгенография, респираторная патология, сердечно-сосудистые заболевания, кардиостимулятор

А. Ческа¹, А. Б. Марченко², А. С. Ахаева²

ӨТКІР РЕСПИРАТОРЛЫҚ ПАТОЛОГИЯМЕН ЖӘНЕ КАРДИОСТИМУЛЯТОРМЕН ПАЦИЕНТТЕРДІ ЕМДЕУ

¹Трансильвания университеті, Брашов қаласы, Клиникалық фтизиатрия госпиталі (Брашов қаласы, Румыния),

²Қарағанды мемлекеттік медицина университеті (Қарағанды, Қазақстан)

Қазіргі уақытта жүрек-буын және тыныс алу-өкпе патологиясы ауыру менөлім-жітімнің жоғары деңгейіне байланысты барынша шұғыл медициналық және әлеуметтік мәселелер болып табылады. Ұсынылған жұмыс пациенттерді емдеудің жекелеген жағдайларына назар аударуға бағытталған, оларға өткір респираторлық симптоматикаға медициналық тексеру жүргізілген. Зерттеу үшін іріктелген пациенттердің қосалқы аурулары, өткір және/немесе кенет басталған созылмалы респираторлық ауруы мен кардиостимулятор пайдалануды талап ететін жүрек-буын аурулары болған. Стандарттық рентгенография мен кеуде клеткасының анамнезі сияқты көптеген зерттеулерден кейін, респираторлық және жүрек симптоматикасының комбинациясы анықталды. Осы зерттеу сол сияқты осы аурулармен пациенттердің жағдайы, қатерлері туралы хабардар болуларын арттырады.

Кілт сөздер: рентгенография, респираторлық патология, жүрек-буын аурулары, кардиостимулятор.