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LUNG PATHOLOGY FUNCTIONAL EXPLORATION

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This study aims to assess the investigations carried out to monitor respiratory function in lung pathologies. From this point of view, COPD is the focus exploration of the respiratory function. In addition to the theoretical data, the study brings together heterogeneous group performed spirometry, results of patients who have had symptoms and they were in the medical services for a period of time.

Key words: risk factors, disease, ethiopathogenetic mechanisms, diagnosis, prevention, screening, monitoring

Pulmonary pathologies drew attention to COPD, due to the high incidence and associated morbidity [5, 21]. According with various studies and knowing different medical informations regarding COPD, was developed a specific health guide. So, for monitoring invalidity potential of the patient's with COPD and for them integration into daily socio-human activities, were developed rules and criteria, written in the specific disease guide, according to this pathology profile [7, 12].

More than that, COPD is currently one of lung pathologies that requires careful monitoring and, in this context, requires also a medical management, in respect of using strict protocols by specific medical guide [11, 18]. In this context, we can mention the nowadays use of the specialized COPD guideline [15]. For diagnostic purpose of this disease, medical methods are envisaged used by those who are part of the multidisciplinary team dealing with the diagnosis of COPD [4, 19]. As any pathology, COPD is based on biomolecular mechanisms in conjunction with pathophysiological mechanisms [2, 16]. From a specific medical point of view, evaluation of respiratory function in COPD is done by routine spirometry without or with bronchodilator test substances, depending of the signs and symptoms for each patient [6]. In this context, spirogram shows the respiratory parameters, the type of airflow limitation, the degree of COPD, to patients with this disease [1, 9].

In addition with specific medical examination and adjacent functional respiratory exploration, for a proper disease diagnostic, it is also important to perform to patients, standard chest X-ray, as an useful imaging method for confirming specific radiological changes in this disease [3, 22]. Certainly, in the diagnosis of COPD, smoking occupying an important place. In addition to risk factors related to lifestyle factors are

taken into consideration ambiental factors, employment and residence area of the ill patients [14, 20].

To reduce risks arising from the gradual advance towards advanced stages of COPD, it is considered useful to implement practical educational methods, with purposes of knowing the disease from different medical perspectives and also the health risks depending of this pathology [10, 13]. In this context, as in any pathology, prevention of COPD is one effective measure for reducing the risks associated with the disease [8, 17].

The aim of the study is evaluation of respiratory function in lung diseases like COPD, using spirometry test. For this purpose, we used two types of spirometry, without test and with test to betamimetics substances, to a heterogeneous group of patients, involving males and females with different residence areas, who were patients in three distinct months for first quarter of 2015.

This study aims at presenting an evaluation of the incidence of COPD in patients who were presented as symptomatics, in the specific medical unit. The study is retrospective and has been done during the first quarter of 2015. The study included all patients who were presented as symptomatics, for disease diagnostic, as a significant group. The evaluated patients were from different residence areas, with different ages, being males and females. Being a statistical study, data were plotted.

The study conducted during the first quarter of 2015 yielded spectacular results on the exploration of respiratory function in patients from the group investigated.

The heterogeneous study group, included all symptomatic patients, with residence in urban

areas and rural areas, of both genders with different age groups (table 1).

Since the investigation of respiratory function is useful as a complementary exam of pneumology, below will present data on the results of the examination spirometry test performed both, this means without and with bronchodilator test substances. More important to know results performing spirometry without bronchodilator substances. In this context, of spirometric tests, 265 were performed without bronchodilator test in

males and 204 in womens. Spirometry performed in January 2015 to male gender are shown in the chart below (fig. 1). Spirometry performed in January 2015 to females, are shown in the chart below (fig. 2).

According to results from the study, spirometry performed without bronchodilator test substances were significantly less in both genders, in the month of January 2015. In the context of both genders were made in January, a total of 469 spirometry without bronchodilator

Table 1 – Age groups of patients in the study group

Age group	1	2	3	4	5	6
Age in years	5 - 14	15 - 24	25 - 39	40-59	60-79	After 80

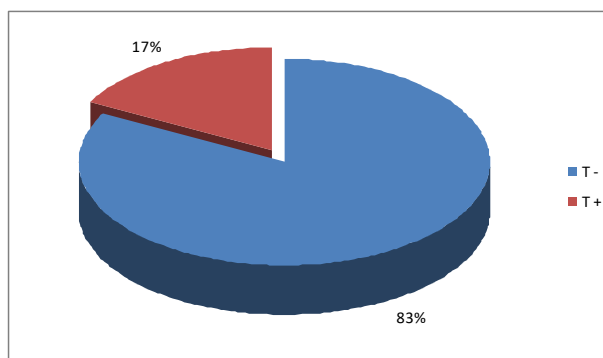


Figure 1 – Spirometry performed in males. January 2015

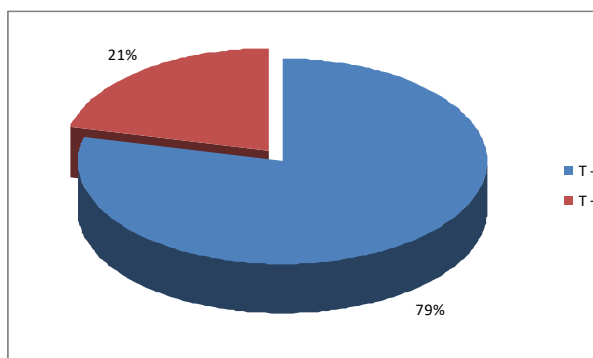


Figure 2 – Spirometry performed in womens. January 2015

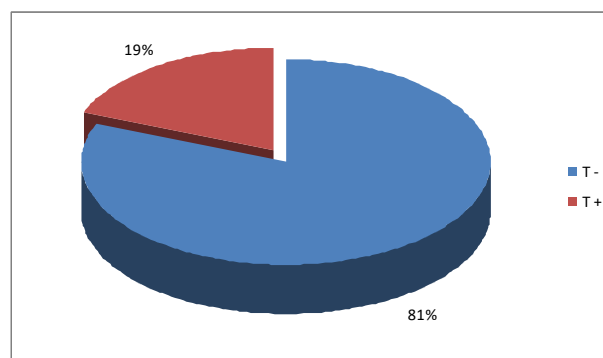


Figure 3 – Spirometry performed in both genders. Janu-

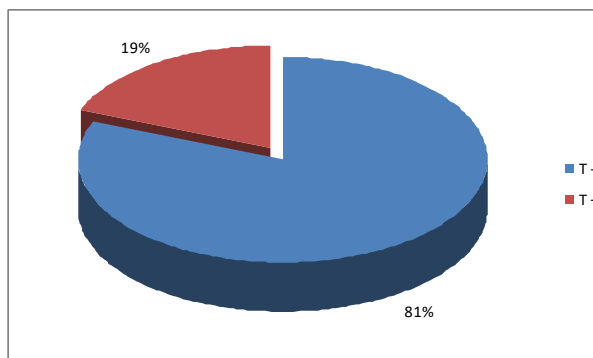


Figure 4 – Spirometry performed in males. February 2015

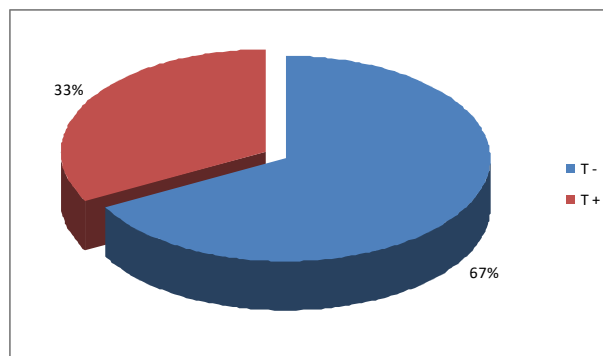


Figure 5 – Spirometry performed in womens. February 2015

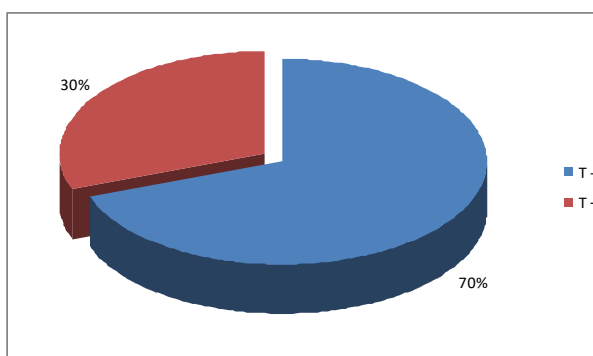


Figure 6 – Spirometry performed in both genders. February 2015

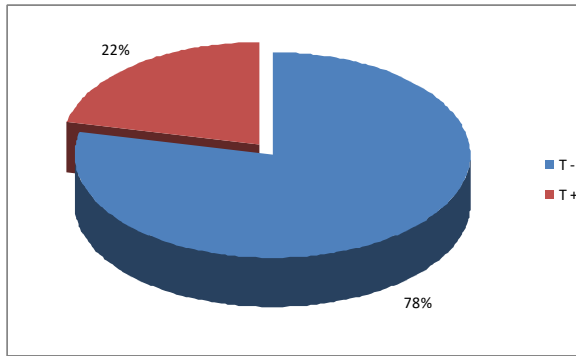


Figure 7 – Spirometry performed in males. March 2015

test and only 110 spirometry performed in both genders, with bronchodilator test substances (fig. 3). In February 2015, were performed 172 spirometry without bronchodilator test and 68 spirometry with bronchodilator test (fig. 4). Spirometry performed to womens in the month of February 2015 were considerably more numerous are those made without bronchodilator test, respectively 145 and only 71 performed with bronchodilators tests (fig. 5). In February 2015 were performed in both genders 317 spirometry, patients having a place of residence both urban and rural areas. Also in the month of February 2015 were performed 139 spirometry with bronchodilator test in patients of both genders, both from urban and rural residence area (fig. 6).

Of these investigations, spirometry performed in males were more compared with those in womens. Those without betamimetics test are more numerous than those made with the ronchodilator test. In March 2015 were carried 288 spirometry to males patients and 290 spirometry to females patients. As in the previously described months in this study, which was performed spirometry predominantly to males, compared to those that were carried out to females, the study showed the predominance of the spirometry test applied to patients, without the bronchodilator substances.

Total spirometry performed to males in March 2015 is shown in the chart below (fig. 7). This graph gives the percentage correlation of the number of spirometry performed to males in March 2015, respectively 226 investigations without test to bronchodilators and 62 investigations with test to bronchodilators. Spirometry performed in womens in March 2015 were 226 without bronchodilator test and only 64 spirometry with the bronchodilator test (fig. 8). In March 2015 were performed a total of 578 spirometry, to patients from the study group, both from urban and rural residence area. Percentage

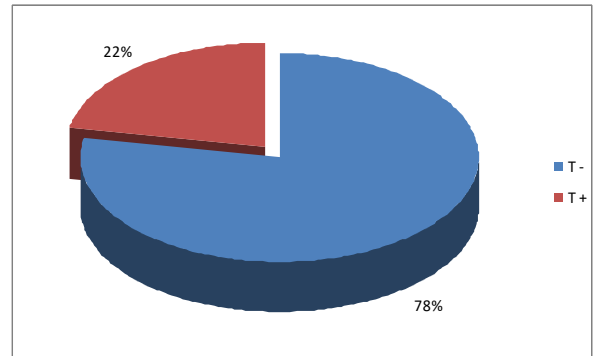


Figure 8 – Spirometry performed in womens. March 2015

exploration of respiratory function in March 2015 was equal for both genders, although spirometry test was performed without test or with test to bronchodilators (fig. 9).

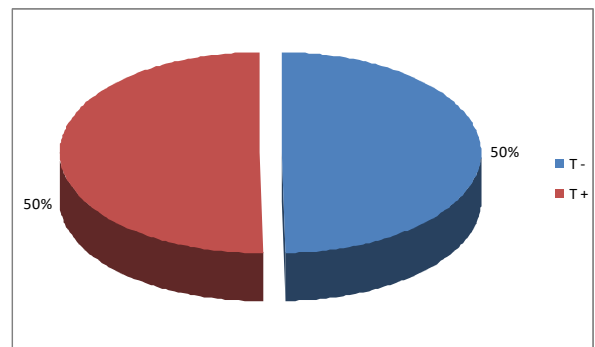


Figure 9 – Spirometry performed in both genders. March 2015

Knowing that this study relates to the exploration of respiratory function to patients with signs and symptoms typical for COPD, for this disease diagnostic, has been implied an interdisciplinary medical team. For a proper diagnosis for COPD, usually are involved pulmonologists, radiologists, working as a high qualified medical staff, for the same purpose, as we mentioned in the present study.

CONCLUSIONS

The study achieve the importance of investigating respiratory function. Making spirometry is useful in lung pathologies affecting the parameters involved in pulmonary function testing. From there, should be concluded that COPD is one of the most important pathology. From another point of view, the study results have shown predominant exposed patients to COPD, group both genders, with residence in urban area, with age 60-79 years. Knowing a lot of medical informations about COPD and investigation for diagnosis, usually spirometry test is done without bronchodilators but may be accompanied by performing spirometry test substances with

betamimetics, where the gravity of the pathology requires. Such situations are encountered in advanced stages of COPD with high level of bronchial obstruction. In these situations, patients with serious symptoms, carry out the investigations, substance inhaled bronchodilators improving bronchial obstruction degree. After previous exposure and as a finally conclusion, results and discussions are eloquent for the purpose of the present study.

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ФУНКЦИОНАЛЬНАЯ ДИАГНОСТИКА ПАТОЛОГИИ ЛЕГКИХ

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В статье осуществлен анализ исследований, проведенных для контроля дыхательной функции при патологии легких. С этой точки зрения, хроническая обструктивная болезнь легких находится в центре внимания при исследовании дыхательной функции легких. Помимо теоретических данных, в статье описан анализ исследования неоднородной группы больных, которым была выполнена спирометрия, описаны результаты обследования пациентов, у которых регистрировались симптомы хронической обструктивной болезни легких, и которые обращались за медицинской помощью в определенный период времени.

Ключевые слова: факторы риска, болезни, этиопатогенетические механизмы, диагностика, профилактика, скрининг, мониторинг

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ӨКПЕ ПАТОЛОГИЯСЫНЫҢ ФУНКЦИОНАЛДЫ ДИАГНОСТИКАСЫНЫҢ МҮМКІНДІКТЕРІ

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Мақалада өкпе патологиясы кезінде тыныс алу функциясын бақылу үшін жүргізілген зерттеулердің талдауы келтірілген. Осы көзқарас тұрғысынан алып қарағанда өкпенің созылмалы обструктивті ауруы өкпенің тыныс алу функциясын зерттеу кезінде басты назарға алынған. Теориялық мәліметтермен қатар, мақалада бір текті емес науқастар тобын зерттеудің талдауы сипатталған, онда спирометрия орындалған, өкпенің созылмалы обструктивті ауруы тіркелген және белгілі бір кезеңде медициналық көмекке жүгінген пациенттерді зерттеудің нәтижелері берілген.

Кілт сөздер: тәуекел факторлары, аурулар, этиопатогенетикалық тетіктер, диагностика, профилактика, скрининг, мониторинг.