

Respiratory Disorders: Physiology and Patient Problems

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Abstract

Respiratory disorders are worldwide studied. The aim of this study was to verify in scientific publications founded in PubMed database the disorders more common that affected the respiratory system and to evaluate the problems concerning to the patients. The methodology was using the words "respiratory disorders", patient, problems, in the PubMed to find the publications that treat these words. We founded 3620 publications of "respiratory disorders", 1422 were associated with patient, 94 publications were associated with the last research with problems. It was founded that out of 38 publications in last ten years 28 were associated with humans. The prevalence of respiratory disorders, like breathing and asthma problems, due to the difficulties faced by patients, were co-related with obesity and smoke mainly.

Keywords: Respiratory disorders; Patient; Physiology; Problems; PubMed

Introduction

Respiratory disorders are worldwide studied. The physiology of these disorders is complex and well described in the literature [1-3]. The main disorders are: asthma, obstructive disease, pneumoniae, bronchiolite and several restrictive diseases are bronchiectasias and lung abscess [1]. These disorders are characterising of lot secretion production and a long remission period without episodes [4,5]. The physiology of these respiratory disorders is related to the mechanism of respiration difficulties, as in inspiration, as in expiration ways, changing until obstructive to restrictive effects [4-7].

In the inspiration mode there are some disorders mainly obstructive diseases and asthma [4,5,7]. The physiology of the inspiration movement is described in a lot of books about respiratory system and in articles [6,8,9]. In the expiration mode there are a few disorders mainly restrictive diseases as bronchiectasias and lung abscess [4,6,10,11]. The physiology concerning to the expiration movement is done by some literature [6,8,9].

The similarity of the clinical picture of lung cancer and obstructive respiratory disorders may cause numerous problems for a proper and prompt diagnosis and the implementation of the appropriate treatment. The knowledge of common pathogenesis both of cancer and obstructive respiratory disorders and the mutual relations between them shall positively affect the diagnostic and therapeutic process in the high-risk patient groups [12].

The most common pulmonary disorders in patients with coronary artery bypass graft were restrictive. They presented an elevated level of generalized inflammatory response both before and after the isolated coronary artery bypass surgery [13]. Other condition is the obesity that could affect respiratory disorders and focuses on obesity hypoventilation syndrome, and it could explain how it can be treated with non-invasive ventilation [14].

The purpose of this work is to study these disorders, action mechanism, physiology, in the tentative to explain the problems faced by patients that have these disorders in the respiratory system.

Materials and Methods

The methodology was done using the words "respiratory disorders", patient and problems, in the PubMed (<https://www.ncbi.nlm.nih.gov/pubmed/>) database to find the publications concerning these words. Then used this information to compare each other and to obtain parameters that justify this research. We chose principal problems that patients fight and results in a respiratory disorder.

Results

We founded 3620 publications of "respiratory disorders", 1422 were associated with patients, 94 with last research with problems. Out of 38 publications in the last 10 years, 28 publications were associated only with humans. Figure 1 present the evolution of publications about "respiratory disorders" along the 10 last years, just the beginning until 2018.

The years of 2016 and 2015 showed more than 12% of publications each. Table 1 shows the percent of publications about patients and problems caused by the disorders. The problems smoke, obesity, breathing, infections, obstetric fistulae, sleep disorders, cardiovascular disorders and muscular disorders were listed. Breathing were the more frequent (32%) problem faced by patients.

Table 2 shows the disorders that are present in patients that presented respiratory problems. Asthma and Chronic Obstructive Pulmonary Disease (COPD) were more frequent (33.33%), followed by emphysema (16.67%).

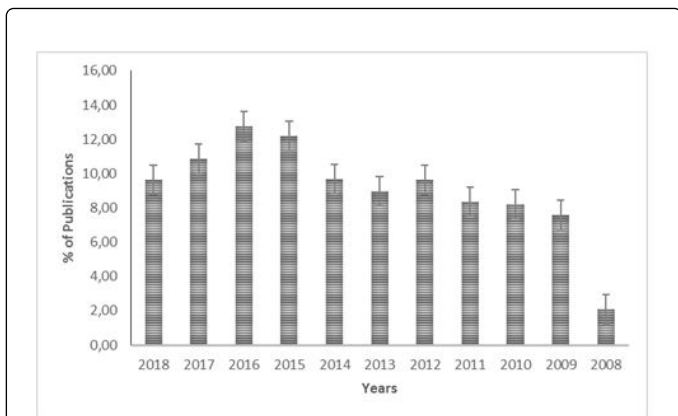


Figure 1: Evolution of publications about respiratory disorders among the 10 last years.

Problem	Percent of Publications
Smoke	4
Obesity	8
Breathing	32
Infections	12
Obstetric fistulae	4
Sleep disorders	28
Cardiovascular disorders	4
Muscular disorders	8

The percentage of publications were calculated with the division of the number of publications by the total of publications.

Table 1: Problems faced by patients that have respiratory disorders.

Disorder	Percent of Publications
Influenza	0
Pneumonia	8.33
Tuberculosis	0
Asthma	33.33
Chronic obstructive pulmonary disease (COPD)	33.33
Bronchitis	8.33
Emphysema	16.67

The percentage of publications were calculated with the division of the number of publications by the total of publications.

Table 2: Disorders that are present in patients that showed respiratory problems.

Discussion

The respiratory disorders were researched in all the world [15-17]. Association with mitochondrial disorders were presented [17]. The association also occurs with breathing [18] and muscular disorders [19]. The most common pathogenesis were cancer and obstructive respiratory disorders and the mutual correlations between it positively affect the diagnostic and therapeutic process in the high-risk patient groups [12]. A as a biomarker, lung tissue elasticity will lead to new end points for clinical trials and new targeted treatment for COPD subgroups [20].

Our results showed that the prevalence of publication in the years of 2015 and 2016, exceeded the number of more than 13000 articles. The published articles have the efforts to explain these mechanisms [21,22].

We listed some problems faced by patients: smoke, obesity, breathing, infections, obstetric fistulae, sleep disorders, cardiovascular disorders and muscular disorders. Breathing appears as the more frequent problem followed by sleep disorders. In the literature breathing was associated with gastroesophageal reflux [23], high fat disease [24] and obesity [25].

The patients that presented respiratory problems as asthma, COPD and emphysema were more frequent in our research. Asthma has high correlation with obesity [25] and smoke [26]. The risk of sepsis and death in patients having COPD is presented by literature [27,28].

Conclusion

The prevalence of respiratory disorders, like breathing and asthma problems, due to the difficulties faced by patients, were co-related with obesity and smoke mainly.

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Conflict of Interest

The author declares no conflict of interest.

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