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Original Research Article

Study of Clinical Profile of Respiratory Diseases in Geriatric Population

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Abstract:
Geriatric individuals are more susceptible to different infections, especially respiratory-tract infections (RTIs) due to their compromised immune system. Hence, the objectives was to study the profile of respiratory diseases in geriatric population attending a tertiary care centre. Geriatric patients, those consenting, with respiratory complaints attending Department of Respiratory Medicine, were taken up for study. 200 patients were included in study,120 males and 80 females. 30% patients were of Upper Respiratory Tract Infection, 24% cases were of Chronic Obstructive Pulmonary Disease, 10 % were of Bronchial Asthma, 8% Pulmonary Tuberculosis. Inpatient Diagnosis of Respiratory Diseases were 31.66% Acute Exacerbation of COPD, 13.3% Pneumonia, 11.66% Pleural Diseases, 18.33% Carcinoma Lung. Respiratory infections and their complications, consisting of Upper Respiratory Tract Infection, Acute Bronchitis, Community Acquired Pneumonia, Pulmonary Tuberculosis and its sequelae, constitute the major respiratory morbidity among geriatric population attending this tertiary care center.
Keyword: Respiratory Diseases, Geriatric Population.

Introduction

Respiratory-tract infections (RTIs) are very common in all ages but most particularly, it affects elderly individuals due to their weaker immune system, along with the presence of other co-morbidities.[1] The burden of RTIs among the elderly population significantly contributes to increased risk of mortality, morbidity and costs throughout the world.[2] Around 85% of deaths among the elderly population were recorded in the United States due to RTIs; moreover, over 16.1 billion dollars were spent on RTIs in 2013.[3] One fifth of the total population in Europe is more than 65 years of age and that proportion may increase up to 25% in 2030.[4] The incidence of RTIs is higher in elderly individuals as compared with young ones,[5,6] as the susceptibility to infections increases with increase in age.[7–9] The mortality rate in individuals over 65 years of age increases approximately 6–7% with the presence of RTIs [10] because of other co-morbidities, weak immune system and poor response to respiratory vaccines[11,12]. Aging has been shown to be associated with gradual decline in many aspects of pulmonary functions, waning of immunity and the immunological mechanisms show a declining efficiency as the antibodies formed much less rapidly in old age than in younger adulthood. This study is to find the current spectrum of respiratory diseases [13] in geriatric population in a tertiary care centre.

Aim and Objectives: To study the profile of respiratory diseases in geriatric population attending a tertiary care centre.

Material and Methods

Geriatric patients, those consenting, with respiratory complaints attending Department of Respiratory Medicine, were taken up for study. 200 patients were included in study,120 males and 80 females. Routine investigations such as chest skiagram, sputum NT C/S, sputum gram stain, sputum AFB and spirometry were done. Those patient requiring inpatient care were admitted. Apart from above mentioned investigation they were subjected to further investigation, as per need, such a Renal function test, Liver function test, blood culture, ECG, ECHO, CT CHEST, Bronchoscopy, thoracocentesis, pleural biopsy and CT guided biopsy.

Inclusion Criteria: Patients with age 65 years or more with respiratory symptoms.

Exclusion Criteria:

- Patients with age less than 65.
- Patients not giving consent.

- Data was expressed as frequency and percentage.

Results

Table 1: Gender distribution of patients

Gender	Number of patients (n=200)	Percentage
Males	120	60%
Females	80	40%

Table 2: Diagnosis of Respiratory Diseases

Diagnosis	Number of patients (n=200)	Percentage
Pneumonia	19	9.5 %
Pulmonary Tuberculosis	16	8 %
Chronic Obstructive Pulmonary Disease	48	24 %
Upper Respiratory Tract Infection	60	30 %
Acute Bronchitis	15	7.5 %
Carcinoma Lung	08	4 %
Pleural Diseases	05	2.5 %
Bronchial Asthma	20	10 %
Bronchiectasis	09	4.5 %

Table 3 : Inpatient Diagnosis of Respiratory Diseases

Inpatient Diagnosis	Number of patients (n=60)	Percentage
Pleural Diseases	07	11.66 %
Bronchiectasis	02	3.3 %
Pneumonia	08	13.3 %
Pulmonary Tuberculosis	04	6.6 %
Pulmonary Tuberculosis Sequelae	05	8.3 %
Asthma Exacerbation	04	6.6 %
Acute Exacerbation of COPD	19	31.66 %
Carcinoma Lung	11	18.33 %

120 were male and 80 female patients. 30% patients were of Upper Respiratory Tract Infection, 24% cases were of Chronic Obstructive Pulmonary Disease, 10% were of Bronchial Asthma, 8% Pulmonary Tuberculosis. Inpatient Diagnosis of Respiratory Diseases were 31.66% Acute Exacerbation of COPD, 13.3% Pneumonia, 11.66% Pleural Diseases, 18.33% Carcinoma Lung.

Discussion

In geriatrics, RTIs are the most common cause of mortality among infectious diseases; moreover, the rate of mortality is higher in geriatrics as compared with young adults infected with RTIs.26 A recent study reported 10–30% increase in mortality rate in geriatrics.[14] The increased prevalence of RTIs in geriatrics may be due to defects in cell-mediated and humoral immunity, alcohol and smoking consumption, presence of polypharmacy and other co-morbidities along with their treatments. Respiratory infections and their complications, consisting of upper respiratory tract infections, acute bronchitis, and community acquired pneumonia, pulmonary TB and its sequelae, constitute the major respiratory morbidity among geriatric population attending this tertiary care center [15]. Upper respiratory tract infections and acute bronchitis is the commonest cause for seeking outpatient care. Pulmonary TB is the second commonest respiratory infection and rank fifth in overall respiratory morbidity. Sequelae of pulmonary TB cause significant respiratory morbidity in the elderly. Among infective disease community acquired pneumonia ranks third. Diabetes is commonest co morbidity associated with community acquired pneumonia. COPD is the second most common morbidity without any gender difference. Active smoking is commonest predisposing factor for COPD in males where it is exposure to indoor pollution in females. AECOPD is the commonest cause of inpatient care. Squamous cell carcinoma is the commonest type of lung cancer among males and it is adenocarcinoma in females. Active smoking is commonest risk factor for the lung cancer in males where it is exposure to indoor pollution in females. Lung cancer patients in this age group presented in an advanced stage. Idiopathic pulmonary fibrosis [16] is the commonest diffuse pulmonary lung disease in this age group followed by hypersensitivity pneumonitis. Among pleural diseases infective cause like tuberculosis effusion and parapneumonoic effusion was the commonest followed by malignant pleural effusion and pneumothorax [17]. Our study showed 120 were male and 80 female patients. 30% patients were of Upper Respiratory Tract Infection, 24% cases were of Chronic Obstructive Pulmonary Disease, 10% were of Bronchial Asthma, 8% Pulmonary Tuberculosis. Inpatient Diagnosis of Respiratory Diseases were 31.66% Acute Exacerbation of

COPD, 13.3% Pneumonia, 11.66% Pleural Diseases, 18.33% Carcinoma Lung. With increasing life expectancy geriatric population [people aged 65 and above] contribute to significant percentage of the world population. It has been projected that by the year 2050, the number of elderly people would rise to about 324 million. Current life expectancy is 62.3 years for males and 65.3 for females. They also contribute to significant percentage of respiratory diseases

Conclusion

Respiratory infections and their complications, consisting of Upper Respiratory Tract Infection, Acute Bronchitis, Community Acquired Pneumonia, Pulmonary Tuberculosis and its sequelae, constitute the major respiratory morbidity among geriatric population attending this tertiary care center. Upper Respiratory Tract Infection And COPD is the commonest cause for seeking outpatient care.

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