



CURRENT CLINICAL PROFILE OF RESPIRATORY DISEASES IN GERIATRIC POPULATION

Dr. K. Varun Raj

Dr. D. Sudeeena*

*Corresponding Author

ABSTRACT Study of current clinical profile of respiratory diseases in geriatric population. We have taken 1234 patients for study in which males were 773 females were 461. 394 patients required inpatient respiratory critical care with community acquired pneumonia, bronchogenic carcinoma, acute respiratory tract infections, acute exacerbation of COPD, bronchial asthma exacerbations and other pleural diseases. 890 patients belong to the age group 65-74yrs and 344 in 75+ yrs age group .studied demographic patient age, sex distribution above the age of 65yrs with more prevalence in males. Respiratory diagnosis in geriatric population upper respiratory tract infections percentage diagnosis is higher. Respiratory diagnosis of inpatient respiratory diseases highest is the acted exacerbation of the COPD. In pneumonia community acquired pneumonia high prevalence in age and sex distribution and highest isolated micro organisms is staphylococcus. For pulmonary TB males are higher with isolated new sputum positive cases.

KEYWORDS : Respiratory Diseases, Geriatric, Copd, Bronchial Asthma In Critical Care Pulmonary T B , Exacerbations, Pneumoconiosis

INTRODUCTION

With increasing life expectancy geriatric population [people aged 65 and above] contribute to significant percentage of the world population. India is in a phase of demographic transition. As per the 2001 census, the population of the elderly in India was 49 million as compared with 20million in 1951. 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 [1]. 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 [2] in geriatric population in a tertiary care centre.

AIM AND OBJECTIVES:

To study the current profile of respiratory diseases in geriatric population attending a tertiary care centre.

STATISTICAL ANALYSIS & DESCRIPTIVE VALUES

In this study 1234 patients were studied in which males were 773 & females were 461.394 patients required in patient care.890 patients belong to the age group 65-74 years & 344 in 75+ year's age group. Respiratory morbidity profiles of these patients are given in following tables 1-10

PNEUMOCONIOSIS SILICOSIS

In this study one case of silicosis with progressive massive fibrosis was found and the case details are as follows

1. 68 yrs old male presented with breathlessness, fever cough
2. No history of prior ATT
3. Smoker for past 30 yrs
4. occupation- digging wells with compressors / drilling machine /using explosives for rock blasting from age 35 to 52 yrs.
5. Sputum AFB negative
6. Bronchial wash – AFB negative
7. CT – chest –hyper dense conglomerate mass of fibrosis suggestive of silicosis with progressive massive fibrosis.

DISCUSSION

In this prospective study observational study 1234 patients were studied in which males were 773 and females were 461. The age ranged from 65 to 89 years with a mean age of 70.1 yrs. In this age group of 65-74 yrs there were 890 patients and 344 in the age group 75+yrs. Respiratory tract infection including URTI [28.44%] Acute bronchitis [8.75%], community acquired pneumonia [4.86] and pulmonary TB [8.58%] constitute 50.63% of the morbidity . Among respiratory infections pulmonary TB stands second. Out of 106 pulmonary TB patients 54 were new sputum positive patients and 24 were new sputum negative patients. In the 26 patients started on category II ATT 14 was due to relapse, 7 due to failure 5 were started

due to treatment after default. Diabetes was the most co morbidity found in elderly patients with pulmonary TB [7] present in 36.79%. Elderly patients with constitutional symptoms compared to respiratory symptoms. TB with its sequelae constitutes 18.96% of the morbidity. Community acquired pneumonia is third among respiratory tract infection with diabetes as the commonest co morbidity associated with.klebsiella pneumonia was the commonest organism isolated found in 29% of the patients of community acquired pneumonia .COPD[8] is next major contributor with 24% of overall morbidity. It is also commonest cause for inpatient care as AECOPD. Among males 98% COPD patients were smokers and in case of females 38% had exposure to passive smoking and 84% had exposure to biomass smoke. Most of COPD patients in this group were in stage 3 and 4 of severity in both males as well as females. Klebsiella pneumonia and pseudomonas aeruginosa were isolated in 28.07% and 10.53% of the patients with AECOPD. There were 117 patients of bronchial asthma in this study in which females contribute 54.7% and males 45.3% most of the patients were in mild persistent [29.9%] and moderate persistent stage [37.6%] of severity. Total no of patients diagnosed to have lung carcinoma [9] during the period of study was 96 with 58 male patients and 28 females. Squamous cell carcinoma was the commonest histological pattern among all carcinomas with 42.71 and in male it contributed to 47.06% in females adenocarcinoma was the commonest with 64.29% majority of the elderly patients with lung carcinoma presented in stage III [44.44%] and Stage IV disease [33.33%] . Active smoking was the major risk factor present in 92% of the males and in females it is biomass fuel in 67.8% of cases .Out of 40 patients with bronchiectasis 17 were males and 23 were females. Idiopathic pulmonary fibrosis, hypersensitivity pneumonitis and RBILD are three diffuse parenchymal lung diseases diagnosed in this study with 47.06%, 47.06%, and 5.88% respectively. Pleural disease [10] in the early constitutes 2.43% of the total. Infectious causing TB and parapneumonic infections are the commonest etiology with 22 patients followed by 4 cases of malignancy and 4 cases of pneumothorax.

CONCLUSION

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 [11]. 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 over all respiratory morbidity. Sequelae of pulmonary TB cause significant respiratory morbidity in the elderly constituting about 10.3% pulmonary TB [12] and its sequelae together constitutes with 18.96% 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. Bronchial asthma constitutes 9.48% Of the morbidity .Carcinoma lung constitutes 7.77% 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 [13] is the commonest diffuse pulmonary lung disease in this age group followed by hypersensitivity pneumonitis. Silicosis was the only pneumoconiosis [15] found in this study. Among pleural diseases infective cause like tuberculosis effusion and parapneumonic effusion was the commonest followed by malignant pleural effusion and pneumothorax [14].

ACKNOWLEDGEMENT

The author thanks to the department of pulmonary medicine superintendent Dr. Ramesh for the co operation of critical care department their assistance during the study.

Table 1: Demography age and sex distribution

	65-74yrs	75+yrs
MALE	555	218
FEMALE	335	126

Table 2: Respiratory diagnosis

DIAGNOSIS	TOTAL	PERCENTAGE(N=1234)
Upper respiratory tract infection	351	28.44
Acute bronchitis	108	8.75
Chronic obstructive pulmonary disease	298	24.14
Bronchial asthma	117	9.48
Pulmonary tuberculosis	106	8.58
Pulmonary TB sequelae	128	10.37
Carcinoma lung	96	7.78
Pneumonia	60	4.86
Bronchiectasis	40	3.24
Diffuse parenchymal lung disease[3]	17	1.37
Pneumoconiosis	1	0.08
Pleural diseases	30	2.43

Table 3: Respiratory diagnosis sex distribution

DIAGNOSIS	MALE[N=773]%	FEMALE[N=461]%
Upper respiratory tract infections[4]	30.6	24.73
Acute bronchitis	9.18	8.02
COPD	26.2	20.6
Bronchial asthma	6.8	13.9
Pulmonary TB	7.6	10.2
Pulmonary TB sequelae	9.6	11.7
Lung cancer	8.79	6.03
Pneumonia [5]	3.1	6.07
Bronchiectasis	2.2	4.99
Diffuse parenchymal lung disease	1.8	0.65
Pneumoconiosis	0.12	0
Pleural diseases	2.32	2.6

Table 4: Respiratory diagnosis age distribution

DIAGNOSIS	65-74 yrs [N=890]%	75+[N=344]%
Upper respiratory tract infections	29.32	26.32
Acute bronchitis	8.98	8.13
COPD	23.3	26.16
Bronchial asthma	11.68	3.77
Pulmonary TB	7.52	11.33
Pulmonary TB sequelae	9.1	13.66
CA lung	6.29	11.62
Pneumonia	3.48	8.43
Bronchiectasis	3.93	1.45
Diffuse parenchymal lung disease	1.79	0.58

Pneumoconiosis	0.11	0	
Pleural diseases	2.47	2.32	

Table 5: Inpatient Diagnosis

DIAGNOSIS	TOTAL	PERCENT AGE[N=424]
Acute exacerbation of COPD	114	26.88
Asthma exacerbation	24	5.66
Pulmonary TB	36	8.49
Pulmonary TB sequelae	39	9.19
Lung cancer	96	22.64
Pneumonia	55	12.97
Bronchiectasis	12	2.83
Diffuse parenchymal lung disease	17	4.00
Pneumoconiosis	1	0.24
Pleural diseases	30	7.07

Table 6: Inpatient diagnosis sex distribution

DIAGNOSIS	MALE[N=259]	FEMALE[N=165]
Acute exacerbation of COPD	27.80	25.45
Asthma exacerbation	3.08	9.70
Pulmonary TB	7.72	9.70
Pulmonary TB sequelae	8.1	10.90
Lung cancer	26.25	16.97
Pneumonia	11.58	15.15
Bronchiectasis	2.70	3.03
Diffuse parenchymal lung diseases	5.40	1.81
Pneumoconiosis	0.39	0
Pleural diseases	6.95	7.27

Table 7: Severity of bronchial asthma

STAGE	MALE[N=53]	FEMALE[N=64]
Intermittent	16.98	17.19
Mild persistent	32.08	28.13
Moderate persistent	35.85	39.06
Severe persistent	15.09	15.63

Table 8: Co-morbidites in bronchial asthma

CO-MORBIDITY	NUMBER OF PATIENTS	PERCENTAGE %
Allergic, rhinitis	35	29.91
urticaria	34	29.06
Respiratory diseases	Pulmonary TB 1 Pneumonia 2	0.85 1.71
Systemic	CAD 7 Systemic HTN 13 Diabetes 9	5.98 11.11 7.69

Table 9: Asthma exacerbation

	65-74 yrs	75+yrs
Male	7	1
Female	13	3

Table 10: Pulmonary TB sequelae

	65-74yrs	75+yrs
Male	48	26
Female	33	21

SOURCE OF SUPPORT: Nil

CONFLICT OF INTEREST: None

REFERENCES

- Lee et al. Is the aging process accelerated in chronic obstructive pulmonary disease? current opinion in pulmonary medicine. 2011;17(2):90-7
- Jarad N. Chronic obstructive pulmonary disease (COPD) and old age. chronic respire dis 2011;8(2):143-51
- Clauw DJ, Mease P, Palmer RH, Gendreau RM, Wang Y The international classification of functioning. disabil Rehabil. 2012 ;34(2):174-7
- simin nikbin , lynette S lekha. Vitamin e and respiratory tract infections in elderly nursing home residents . JAMA. 2004; 292:828
- Michelow IC .The community based pneumonia incidence study group .Arch Intern Med. 1997;157:1709-18.
- Vladimir Kaplan, Derek k angus, Hospitalized community acquired pneumonia in

- elderly. *AM J respire crit care med* 2002; 165:766-772
7. Sliql et al., Human immunodeficiency virus (HIV) infection of macrophages in braincurr opin infect dis .2011;24(2): 142-7.
 8. Akhee S et al., Diabetic foot infection. *south med J*. 1997; 90[3]:296-8
 9. Fernandez –sabe N et al. Community-acquired pneumonia in the elderly: Spanish multicentre study. *In medicine [Baltimore]*. 2003; 82(3):159-69.
 10. Iyer SR . Trends in diabetes epidemiology in Indian population. *j assoc physicians india* . 2010; 58:44-46
 11. moise sain et al., Differentiation analyses of adult suspension mononucleated blood cells. *semin respir crit care med* 2010 ;31(5) :607-617 ..
 12. dheeraj gupta , navneet singh , manifestations of pulmonary TB in elderly . *IND. Journal of chest disease and allied sciences*; 2008 ;50 :263-8
 13. maria korzeniwska –kosela , M.D, Joseph krysl, T B in young adults and the elderly . *Chest* 1994 ; 106 ;:28-32
 14. yoneda R. Tuberculosis sequelae. *kekkaku* . 1990; 65 (12) :827-9
 15. Harada S, Harada Y Kitahara Y. Tuberculosis sequelae :clinical aspects. *Kekkaku*. 1990; 65(12):831-8.