



**A STUDY ON DEMOGRAPHICS, COMORBIDITIES AND OUTCOME OF PATIENTS WITH SEVERE BILATERAL PNEUMONIA ADMITTED IN TERTIARY CARE HOSPITAL**

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**ABSTRACT**

Pneumonia is a major health problem that has devastating effects all around the world, accounting for 10% of all adult and pediatric hospitalizations. The initial information will be gathered with the use of a proforma that has already been set up. This study is conducted on non-invasive ventilator-supported "Sri Aurobindo Institute of Medical Sciences & Postgraduate Institute (Indore, M.P.)" cases of respiratory failure at the Department of Respiratory Medicine (SAIMS). Based on their age and gender, the patients assess the data. The design of the investigation is based on an observational study. The present study will be a prospective, 18-month-long investigation including 100 patients with proven respiratory failure. In our study majority of admitted patients was male and with pre-existing conditions like DM, HTN, CAD. The differences by age, sex, comorbidities, require further research to clarify their causes, and to devise strategies for reducing critical illness in high-risk groups.

**KEYWORDS :** NIV -Non Invasive Ventilation, OT -Oxygen Therapy, CAP-Community Acquired Pneumonia, ABG - Arterial Blood Gas, DM -Diabetes Mellitus, CAD – coronary artery disease

**INTRODUCTION**

Pneumonia is a major health problem that has devastating effects all around the world, accounting for 10% of all adult and pediatric hospitalizations. Clinical symptoms of pneumonia include a rapid onset of fever and chills, coughing up purulent sputum, wheezing, and pleuritic chest pain. Headaches, muscle aches, weariness, a sore throat, sickness, and diarrhea are all extrapulmonary symptoms that often accompany respiratory illnesses. Respiratory failure is one of the complications of the disease process, which needs aggressive treatment with noninvasive oxygen therapy, or invasive ventilation, depending on the severity of the sickness, and if left untreated, might result in the patient's death. Objective is To study the demographics of patients suffering from severe bilateral pneumonia.

**MATERIALS AND METHODS**

**Study plan**

The study is being carried out by the division of the hospital that specializes in pulmonary medicine (SAIMS). At the "Sri Aurobindo Institute of Medical Sciences and Postgraduate Institute in Indore, Madhya Pradesh", patients who had been diagnosed with respiratory failure and who were being supported by non-invasive ventilators were included in this study.

**Subjects**

The patients clinically diagnosed as respiratory failure due to pneumonia will be included in the study. The patients admitted in respiratory IPD in the Department of Respiratory Medicine. Duration of the study

The duration of the present study was of 18 months from 1st April 2021 to 30th September 2022.

**Inclusion criteria**

- Patients above 18 years of age.
- Patient with diagnosed case of respiratory failure on non-invasive ventilator support.
- Patient willing to participate in study.

**Exclusion criteria**

- All known cases of cancer patients are excluded from study.
- All diagnosed cases of CCF

**RESULT AND DISCUSSION**

The following tables and legends outline the methodology used to organize and interpret the results. However, selected demographics of all studied patient who were clinically diagnosed with bilateral pneumonia such as age, gender were summarized in below depicted figures. The age distributions of patients who were evaluated and diagnosed with bilateral pneumonia are shown in figure 1.1.

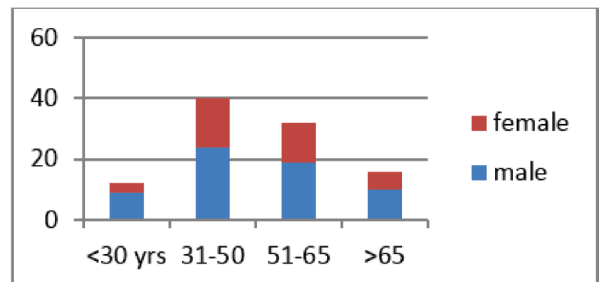


Figure 1.1 age and gender distribution among patients.

There were proportional variations detected in the age distribution of patients who were studied. According to the findings of the study, 12 of the patients were between the ages below 30 years. In addition to this, it was observed that the age group of 31-50 years and above 65 years comprised a total of

56 patients. In contrast to the age group of 51-65 years, which comprised 32 patients. Majority of admitted patients was between age 31-50 years. Only 16 percent patients was more than age 65. It was also found that 62 percent was male.

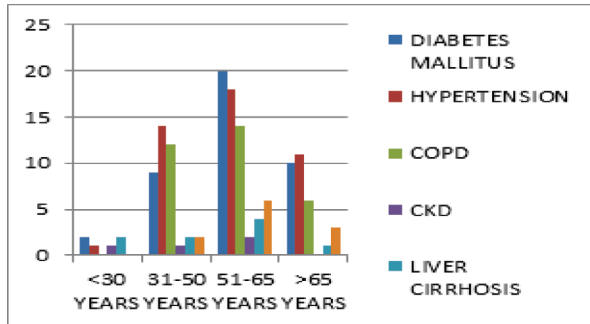


Figure 1.2 age wise distribution of comorbidities.

In males 37% was diabetics and 61% was hypertensive. In contrast among females 47% was diabetics, 36% hypertensive. Maximum percentage of diabetics patient was found in age group 51-65. There is significant association of outcome in critical ill patients with comorbidities. 18 percent of patients was intubated and 66% patients on mechanical ventilator support was certified within 30 days of admission. Patients having higher sofa score at the time of admission have higher mortality as compare to others.

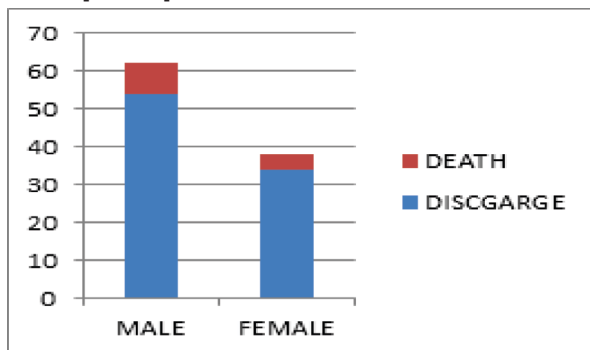


Figure 1.3 outcome gender wise.

It was also found that total 88% was successfully discharged home, out of them 56 percent was male and rest female.

**CONCLUSION**

In our study majority of admitted patients was male and with pre existing condition like dm, htn, cad. These temporal trends in icu admission rates and cumulative bed days used have significant implications for health system planning. The differences by age, sex, comorbidities, require further research to clarify their causes, and to devise strategies for reducing critical illness in high risk groups.

**REFERENCES:**

- Mandell LA, Wunderink RG, Anzueto A, Bartlett JG, Campbell GD, Dean NC, et al.; Infectious Diseases Society of America; American Thoracic Society. Infectious Diseases Society of America/American Thoracic Society consensus guidelines on the management of community-acquired pneumonia in adults. Clin Infect Dis 2007;44:S27-S72.
- Guyatt GH, Oxman AD, Kunz R, Atkins D, Brozek J, Vist G, et al. GRADE guidelines: 2. Framing the question and deciding on important outcomes. J Clin Epidemiol 2011;64:395-400.
- Mettlay JP, Kapoor WN, Fine MJ. Does this patient have community-acquired pneumonia? Diagnosing pneumonia by history and physical examination. JAMA 1997;278:1440-1445.
- Sato T, Aoshima M, Ohmagari N, Tada H, Chohnabayashi N. Usefulness of sputum Gram staining in community-acquired pneumonia [in Japanese]. Nihon Kokyuki Gakkai Zasshi 2002;40:558-563.
- McCauley LM, Webb BJ, Sorensen J, Dean NC. Use of tracheal aspirate culture in newly intubated patients with community-onset pneumonia. Ann Am Thorac Soc 2016;13:376-381.