NEUTROPHIL TO LYMPHOCYTE RATIO AS A MARKER OF ACUTE EXACERBATION AND DISEASE SEVERITY IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE

General Medicine

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KEYWORDS

OBJECTIVES OF THE STUDY

- To identify the possible correlation between neutrophil to lymphocyte ratio and severity of COPD.
- To identify correlation between NLR with pulmonary function test(FEV1) in COPD patients.
- To study the prospects of NLR considered to be newer cheaper indicator in acute episodes of COPD.

MATERIALS AND METHODS

Source of Study

The study is conducted on patients attending Sree Balaji Medical College and Hospital, Chennai during the study period. A sum total of 100 patients with Chronic Obstructive Pulmonary Disease attending Sree Balaji Medical College and Hospital was included in the study, based on the inclusion and exclusion criteria. The study is done after getting informed signed consent from the patients participated in the same. Duration of study was one year.

Design of Study- Cross Sectional Study Methods of Collection of Data Sample Size-100 patients

Sampling Method: Random sampling

The study included patients with Chronic Obstructive Pulmonary Disease irrespective of the severity and duration of disease. Study cases are personally interviewed to get relevant details after getting informed signed consent. Based upon inclusion and exclusion criteria a minimum of 100 cases are selected. An exacerbation of COPD is defined as an onset or worsening of more than two respiratory symptoms (ie, dyspnea, cough or wheeze, sputum amount or purulence) for two or more consecutive days.

INCLUSION CRITERIA

Stable diagnosed COPD patients of age 40 years or older who were current or ex smokers based on clinical history and examination attending Sree Balaji Medical College and Hospital.

EXCLUSION CRITERIA

- age < 40 years
- Patients with and diagnosed as Bronchial Asthma, Bronchiectasis or Bullous lung disorders.
- Patients with active pulmonary tuberculosis.
- Patients with malignancy.
- Patients with hepatic disease, renal disease, myocardial infarction.
- Patients with any other acute or chronic infections.
- Patients with pneumonia.
- Patients with dementia.
- Patients with Diabetes Mellitus.
- Patients receiving systemic corticosteroids, antibiotics.
- Patients receiving immunosuppressive treatment.

METHODS OF STUDY:

Data is collected using pretest proformas according to the objectives of the study. After getting informed signed consent detailed history and examination were done in 100 patients included in the study. The aim and purpose of study was was informed to the patients and there informed consent obtained.

Those patients who satisfied all the inclusion and exclusion criteria were selected for the study

AGE DISTRIBUTION VS MEAN NEUTROPHIL LYMPHOCYTE RATIO

SMOKING STATUS VS MEAN NEUTROPHIL LYMPHOCYTE RATIO

6 MINUTE WALK DISTANCE VS MEAN NEUTROPHIL LYMPHOCYTE RATIO

WHEEZING VS MEAN NEUTROPHIL LYMPHOCYTE RATIO

MMRC GRADING VS MEAN NEUTROPHIL LYMPHOCYTE RATIO

CHET X RAY VS MEAN NEUTROPHIL LYMPHOCYTE RATIO

FEV1 VS MEAN NEUTROPHIL LYMPHOCYTE RATIO

CONCLUSION

Neutrophil lymphocyte ratio is a blood parameter which is easily obtained, and is significantly raised in acute exacerbations of COPD, based on its severity of exacerbation. Those who had more the ratio of NLR indicates more severe the disease. The prognosis and survival rate will be poor in high NLR ratio patients and these patients can be picked up early with the simple investigation-NLR and have to be effectively intervened and rehabilitated to decrease the mortality and morbidity and to have a good quality of life.

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