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Assessment of Biochemical, Physical parameters and Dietary Practices among Chronic Obstructive Pulmonary Disease (COPD) Patients

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ABSTRACT

Introduction: Chronic Obstructive Pulmonary Disease (COPD) is a progressive respiratory disorder with dietary habits and nutritional status playing a crucial role in symptom management and disease progression. Limited studies have evaluated the knowledge, attitudes, and practices of patients regarding COPD-specific food guidelines and their relationship with biochemical indices. This study evaluated dietary adherence in COPD patients, its link to biochemical markers and symptom severity, and explored educational gaps and the impact of dietary interventions on disease management.

Aim: This study aimed to assess the practices of individuals diagnosed with COPD concerning dietary recommendations and analyse the relationship between adherence to these guidelines, biochemical markers, and symptom severity. Secondary objectives included identifying educational gaps and evaluating the potential impact of dietary interventions on disease management.

Materials and Methods: A cross-sectional study was conducted among COPD patients (n=60) using structured questionnaires and Modified Medical Research Council (MMRC) questionnaire, Questionnaire for dyspnoea scale (mainly COPD patients) to evaluate these patients. Biochemical indices such as serum albumin, lipid profile, and inflammatory markers (e.g., CRP) were assessed. Participants were assessed on their dietary habits, their physical health, severity of COPD and much more. Data were analysed using statistical tools to determine correlations and significant differences.

Results: Findings revealed that participants with higher knowlege to COPD-specific dietary guidelines had significantly lower levels of inflammatory markers and reduced symptom severity. Approximately 38% of the participants, who consume high amount of Omega 3 fatty acid, magnesium, protein rich foods faces less severe problems. Conversely, those with poor adherence exhibited worsened symptoms and suboptimal biochemical profiles. Knowledge gaps were observed in 67% of participants, highlighting the need for targeted educational interventions.

Conclusion: Adherence to dietary guidelines positively influences biochemical indices and reduces COPD symptom severity. The study emphasises the importance of nutritional education as an integral component of COPD management. Future research should explore long-term dietary interventions and their effects on disease progression.

Keywords: Biochemical indices, Dietary guidelines, Nutritional education

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