MICROBIAL AND CULTURE SENSITIVITY PATTERN OF SPUTUM IN PATIENTS ADMITTED WITH ACUTE EXACERBATION OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE

By

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ABSTRACT

Introduction: Acute exacerbation of Chronic obstructive Pulmonary disease (AECOPD) is defined as worsening of the patient's condition from the stable state in baseline dyspnoea ,cough/sputum or both , beyond normal day to day variation and requires change in regular medication. Commonly associated with infective origin. Distribution and sensitivity to antimicrobial agents varies widely. Hence we conducted a study analysing the associated clinico epidemiological sources and the culture sensitivity pattern of sputum in the patients presented with AECOPD at our epidemiological area.

Objectives: To study the pattern of bacterial infections, their antibiotic sensitivity and to formulate an empirical treatment for patients admitted with acute exacerbation of COPD to our hospital.

Methodology: 110 patients, age >18 years and who were diagnosed as AECOPD were recruited. All the laboratory and radiological examinations were done. Sputum culture sensitivity was sent.

Results: Average age of the study population was66.72±9.05 years with male predominance. 42% of the patients were smokers. 31.8% of the recruited study population were presented with hypoxia. Majority of them were presented with raised total counts and CRP . 46% were observed with emphysema and 19% with other signs of pneumonia on X ray. 50.91 % of the isolates found to be having gram negative infection followed by 27 (24.55%) with gram positive and 4 (3.64%) had mixed infection. Of these gram negative organisms Klebsiella was the highest and of the gram positive, prevalence of streptococcus was more. Colistin had the highest

proportion of sensitivity i.e. 46 (41.82%) in 110 of the patients, followed by Imipenem i.e. 44 (40%) samples were sensitive and Tigecycline in 44 (40%). There was no significant difference found between the patients with and without comorbid conditions.

Conclusion: Elderly patients are more prone to develop AECOPD. The patients with comorbid conditions and chronic smokers are also at higher risk of developing AECOPD.Prevalence of gram negative organisms was statistically high compared to gram positive among which the prevalence of Klebsiella was the highest. Of the grown gram positive organisms, streptococcus was more.