

Abstract

Objective: Chronic respiratory diseases are a major public health problem in India as well as worldwide. Pulmonary infections are attributed as the most cause of exacerbations in this group of diseases. Broncho alveolar lavage as a diagnostic technique has improved the sensitivity and specificity of diagnosing pulmonary infections. Institutional antibiogram plays as vital tool for antimicrobial resistance detection and monitoring.

Materials and Methods: Prospectively BAL fluid for Chronic respiratory diseases cases was analyzed for bacterial and fungal isolates. Antimicrobial susceptibility testing was done for bacterial isolates. Molecular characterization was done for the commonest isolated organism.

Results: From 100 BAL samples processed for culture of bacterial and fungal, 35 samples showed positive growth. Out of which 25 were bacterial isolates and 10 were fungal isolates. *Klebsiella pneumoniae* 20% was the commonest bacterial pathogen. *Candida albicans* 14% was the commonest fungus isolated. High antimicrobial resistant was noted in *Acinetobacter baumannii*. Gram negative bacterias exhibited more antimicrobial resistance than Gram positive organisms. 100% sensitivity was observed to lineolid and vancomycin. Pulmonary infections was more prevalent in COPD among chronic respiratory diseases.

Conclusion: Bronchoalveolar lavage an invasive quantitative diagnostic procedures as has increased the sensitivity and specificity of pulmonary infection diagnosis. Gram negative bacterias are emerging as primary pathogens and exhibits high antibiotic resistance. Every health set up needs an updated antibiogram based on bacterial patterns and antibiotic resistant pattern for the judicious use of antibiotics.

Keywords: Bronchoalveolar lavage, Antibiotic sensitivity, *Klebsiella*, *Candida*.