

6th Euro-Global Conference on

INFECTIOUS DISEASES

September 07-09, 2017 | Paris, France

Prevalence of Aerobic Gram-Negative Bacilli in Lower Respiratory Tract Infections in Menoufia Governorate, Egypt

Rabab A. Elwahsh, Shymaa A. El Askary, Amal F. Makled, Gehan A. Abdel Aal and Reda A. Ibrahim
Menoufia University, Egypt

Background: Lower Respiratory Tract Infections (LRTIs) are among the most common infectious diseases affecting humans worldwide and are considered as an important cause of morbidity and mortality for all age groups. Almost three quarters of all antibiotic consumptions are for respiratory tract infections.

Methods: Two hundred and twenty two gram negative bacteria (GNB) were isolated from 763 LRTIs specimens in the period from February 2015 to January 2016 by conventional microbiological methods. Multidrug-resistance (MDR), extensively drug-resistance (XDR) and pan drug resistance (PDR) for GNB were examined by disc diffusion method. ESβL and MβL GNB suspected strains were studied by screening and confirmatory tests.

Results: The prevalence of culture positive specimens was (65.9%) of the studied specimens, 44.1% of them were aerobic GNB which was distributed as 35.8% of the ward isolates and 60.7% of ICUs isolates. Klebsiella spp. (44.6%) was the most common GNB isolated from LRTIs patients followed by E coli (20.3%), Pseudomonas spp. (18%), Acinetobacter spp. (10.8%), Enterobacter (4.5%) and Citrobacter (1.8%). Total MDR, XDR and PDR GNB were 45.5%, 47.8% and 5.0% respectively. There was statistically significant difference between the studied fermentative GNB and non-fermentative GNB (60.1% Vs. 42%) for ESβL production by Cephalosporin/clavulanate combination disks test (confirmatory test). The highest percentage of MβL production by confirmatory IPM/EDTA was for Acinetobacter spp. (62.5%) followed by Pseudomonas spp. (60%), Klebsiella spp. (52.5%) and E coli (40%). The mortality rate was 7.4% and 10.9% in patients who had ESβL or MβL producing isolates respectively.

Conclusions: Multidrug-resistant (MDR) gram-negative bacilli (GNB) are now widespread especially in patients with LRTIs and present a major challenge to modern medical practice. Longer hospital stay, ICU admission, invasive procedures, associated comorbid conditions and empirical antibiotic usage were significantly high risk factors for acquisition of ESβL and MβL.

Biography

Rabab El wahsh and her coworkers has conducted this study to determine the prevalence of aerobic gram negative bacteria among LRTIs patients and associated risk factors in addition to its effect on patient outcome with declaration of MDR aerobic Gram-negative bacilli (GNB) causing LRTIs, with a special reference to extended-spectrum beta-lactamase(ESβL) and metallo-beta-lactamase (MβL) producing bacterial strains and to study their relation with patient's mortality and morbidity. They found Multidrug-resistant (MDR) gram-negative bacilli (GNB) are now widespread especially in patients with LRTIs and present a major challenge to modern medical practice.

rababwahsh@yahoo.com

Notes: