

Incidence, Risk factors and clinical outcomes of patients with hypermucoviscoid klebsiella in tertiary intensive care unit



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Abstract

Background and Objectives

Hypermucoviscoid Klebsiella(hvKP), a dreaded variant of Klebsiella, so far, fewer cases were reported from the community. This study was designed to evaluate the incidence of hvKP isolates, risk factors for hvKP infections, antibiotic sensitivity pattern and clinical outcome including morbidity and mortality.

Patients and Setting

Patients who have got admitted under medical intensive care unit (MICU) and had positive culture of Klebsiella infections.

Materials and Methods

This study was conducted at department of MICU at a tertiary care hospital between January 2018 and December 2018. A standardized proforma was prepared and data was collected, which includes basic demographics of the patients, co-morbidities, clinical details and mortality. This study was approved by the Institutional Review Board and Ethics Committee. Results: A total of 165 patients (males, 123; 74.5%) had Klebsiella pneumoniae infection during the study period, out of whom 32 was hvKP (19.4%). The mean age was 53.1 ± 16.8 years. Among the 32 hvKP patients, 22 (68.8%) were hospital acquired infection (HAI) and 10 were (31.2%) community acquired infection. The overall mortality rate of hvKP infection was 56.2% (18/32). The incidence of mortality rate was similar in patients having pan-drug sensitive and in patients with extreme drug-resistance (61.9% vs. 66.7%; $P = 0.831$). HAI is significantly associated with multi drug resistance of hvKP (odds ratio [OR], 7.917; $P < 0.05$) and diabetes is associated with increased risk of hvKP related mortality (OR, 5.250; $P = 0.054$). Conclusions: Our study results showed, increased incidence of HAI with hvKP predominantly associated with pneumonia and increase in trend of drug resistance with two cases being pan resistant. More number of studies are required to evaluate the existing antibiotics strategy and steps to curb the spread of this dreaded infection.

Biography

Tesfaye Andualem Demissie has completed his MSc in Medical Microbiology at the age of 24 from University of Gondar Ethiopia. He is a researcher and a University lecturer in Debre Tabor University. He was a coordinator of Microbiology, Parasitology and immunology. And he is now also a clinical coordinator in Debre Tabor University teaching Hospital. He has published more than 10 papers in scientific journals.