19th World Conference on Infectious Diseases, Prevention and Control December 10, 2024 | Webinar

Fecal carriage of carbapenem resistant Enterobacterales and associated facto-rs among admitted patients in Saint Paul's Hospital Millennium Medical Coll-ege, Addis Ababa, Ethiopia

Yonas Mekonnen Ethiopia

Purpose: The Enterobacterales family colonizes the human gut as normal flora in all age groups, with bacterial infections being the most common cause. Resistance is currently observed in all normal floras. The aim of this study was to determine the frequency of fecal carriage of carbapenem resistant Enterobacterales (CRE), carbapenemase producing Enterobacterales (CPE), and associated factors in the faces of admitted patients.

Methods: A cross sectional was conducted in Saint Paul's Hospital Millennium Medical College, Addis Ababa, Ethiopia. A total of 384 rectal swabs were collected from various wards in adm-itted patients who have consented to participate. The specimens were inoculated on a MacConke-y agar plate and then they were incubated at 37oc for 18 to 24 hours. By using BD PhoenixTMM50 compact system identification and antimicrobial susceptibility testing were performed. Using the modified carbapenem inactivation method it was determined whether the carbapenem-resistant bacterial isolate produced carbapenemase or not.

Results: Overall prevalence of carbapenem resistant Enterobacterales carriage and, carbapenm-ase prodcing Enterobacterales in admitted patients was 17.2% (95%, Confidence Interval: 13.3% 21.1%) and 7% (95%, Confidence linterval: 4.7% 9.9%) respectively. The predominate carbapenem resistant Enterobacterales in fecal carriage were K. pneumoniae, 15.4% (23/149), E.cloacae 15.4% (6/39), followed by E. coli 12.4% (37/307) of carbapenem resistant Enterobacteral-es (CRE) isolate. Carbapenem resistant Enterobacterales carriage isolates showed lareg level of resistance to ciprofloxacin, and sulfamethoxazole trimethoprim. Prior intake of antibiotics (Odds Ratio 2.42, 95% CI: 11.186 4.95) was significantly associated with higher carbapenem resistant Enterobacter-ales carriage.

Conclusion: we observed a high prevalence of carbapenem resistant Enterobacterales carriage -and carbapenemas producing Enterobacterales among admitted patients. There were only amika-cin and colistin that could be effective for carbapenem resistant Enterobacterales isolates. Hence, the control of carbapenem resistant Enterobacterales carriage should be given priority by carb-apenem resistant Enterobacterales carbapenem resistant enterobacterales and adhering to go-od infection prevention practice in hospital settings.

Biography

Yonas Mekonnen is a dedicated researcher and healthcare professional with extensive experience in bacterial, viral, and fungal infections. Based at Saint Paul's Hospital Millennium Medical College in Addis Ababa, Ethiopia, Yonas has been actively involved in clinical research, diagnostics, and treatment approaches related to infectious diseases.With a strong background in microbiology and infectious disease management, Yonas has contributed to the understanding of antimicrobial resistance, epidemiology, and emerging infectious threats in both hospital and community settings.