46. High Multidrug-Resistant due to TEM and CTX-M-1 Types of Extended-Spectrum β-Lactamase and blaNDM-1 Type Carbapenemase Genes among Clinical Isolates of Asella, Central Ethiopia

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Results: In total, 684 patients 21 year of age with fever admitted to the Asella Teaching Hospital from April 2016 to June 2018 were included. Blood and other appropriate clinical specimens were cultured. Susceptibility testing was performed using the Kirby–Bauer method and VITEK2. Confirmation of species identification and identification of resistant species were conducted using MALDI-ToF and PCR at a microbiology laboratory in Düsseldorf, Germany.

Background: Acute infectious diseases and sepsis are among the leading causes of mortality in Ethiopia. The lack of local data concerning causative pathogens and resistance patterns results in suboptimal empirical treatment and unfavorable clinical outcome. The objective of this study was the characterization of bacterial pathogens in hospitalized patients with febrile infections in Central Ethiopia.

Methods: In total, 684 study patients were included; 54% were male and mean age was 26.7 years. Thus, the overall culture positivity rate was 7.5%. Of the 83 cultured organisms, 38(46%) were Gram-negative, 41(52%) Gram-positive, and 2(2%) Candida species. Among the 38 Gram-negative isolates, 16(42%) were E. coli, 15(39%) K. pneumoniae, and 4(11%) P. aeruginosa. Resistance against commonly used antibiotics for Gram-negative at the study site was: pipercillin/tazobactam 48%(13), ampicillin/sulbactam 93%(25), cefotaxime 89%(24), ceftazidime 74%(20), Cefepime 74%(20), meropenem 79%(2), amikacin 12%(1) and gentamicin 21%(4). Of 27 Gram-negative isolates with biofilm formation, 56% and 58% of the isolates demonstrated a ≥250% increase in formation when exposed to sub-MIC concentrations of levofloxacin and levofloxacin, respectively. None of the strong biofilm former demonstrated a ≥50% peak increase in formation when exposed to the antibiotic. The isolates that demonstrated a ≥250% increase in formation when exposed to sub-MIC concentrations of levofloxacin and levofloxacin, respectively. The isolates that demonstrated a ≥250% increase in formation when exposed to sub-MIC concentrations of levofloxacin and levofloxacin, respectively. The isolates that demonstrated a ≥250% increase in formation when exposed to sub-MIC concentrations of levofloxacin and levofloxacin, respectively.

Conclusion: Strengthening of antimicrobial stewardship programs is needed in order to face the threat of multidrug-resistant bacteria. Disclosure: All authors: No reported disclosures.