

JOINT EVENT

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Extended-spectrum beta-lactamase producing and multi-drug resistance *Enterobacteriaceae* in Addis Ababa, Ethiopia**Dejenie Shiferaw¹, Abebe Aseffa¹, Melese Hailu Legese², Tesfaye Legesse⁴, Hiwot Ketema¹ and Kassu Desta²**
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The global emergence and spread of Extended-spectrum beta-lactamases (ESBLs) producing *Enterobacteriaceae* have been threatening the ability to treat infection. Hence, this study aimed to determine the prevalence of ESBLs producing and multi-drug resistance (MDR) *Enterobacteriaceae* (ESBLs-E) from different clinical specimens in Addis Ababa, Ethiopia. A cross-sectional study was conducted from January 1 to May 30, 2017 at EPHI. Identification and antimicrobial susceptibility testing (on Muller Hinton agar) was performed on 426 *Enterobacteriaceae* isolates. All *Enterobacteriaceae* were screened for ESBLs production using cefotaxime and ceftazidime as per CLSI guideline. ESBLs specious *Enterobacteriaceae* were confirmed by combination disk test (CDT). Data was entered and analyzed by using SPSSV20. The most frequent *Enterobacteriaceae* were *E. coli* 228 (53.5%) and *K. pneumoniae* 103 (24.1 %). The magnitude of ESBLs-E was 246 (57.7%). The highest frequencies of ESBLs-E were observed in blood specimen (84.4%) and the highest ESBLs production was observed in *K. pneumoniae* (85.4%). Highest resistance level was seen to sulfamethoxazole-trimethoprim (77.0%), augumentin (71.6%), cefotaxime (62.2%), cefepime (60.3) and ceftazidime (60.8%). The resistance to meropenem, amikacin and cefoxitin were 5.2%, 13.8% and 25.1% respectively. The overall magnitude of MDR level was 68.3%. Of ESBLs-E, 96.3% of them were MDR (P<0.001). There was a high prevalence of ESBLs-E and MDR isolate in Addis Ababa. Most of ESBLs-E was isolated primarily in blood and urine. The highest ESBLs production was observed among *K. pneumoniae*.

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