Abstract: Background and Objectives: Extended-spectrum β-lactamase (ESBL) production in the members of the family Enterobacteriaceae can confer resistance to expanded-spectrum cephalosporins and the penicillins. In the recent years, there has been an increased incidence and prevalence of ESBLs all over the world and also in various parts of Iran. As there was no data which was available on the prevalence of ESBL in this region, the current study was undertaken to know the prevalence of ESBL producing Enterobacteriaceae at our two hospitals.

Materials and Methods: This study was carried out on 160 clinical isolates of Enterobacteriaceae. The screening for ESBL production was done by the MacConkey Agar containing 4 mg/liter ceftazidime which was recommended by the CLSI and the screen positive isolates were confirmed by the phenotypic disc confirmatory test (PDCT).

Results: E.coli (67.2%) was most common isolate, followed by K. pneumoniae (25.5%) and other member of Enterobacteriaceae (7.3%). ESBL production was confirmed in 75(46.8%) isolates. The isolates of E.coli 43 (57.3%) were the most common ESBL producers, followed by the isolates of K. pneumoniae 18 (24.5%) and others. The most ESBL producing organisms were found in urine samples and ESBL production was most commonly seen in the Enterobacteriaceae which were isolated from the intensive care unit patients.

Conclusion: There is a high prevalence of ESBL production in our hospital. Specific tests to detect ESBL production should be done routinely and an empirical therapy policy should be applied to the high risk units, based on the prevalence of the ESBL producing Enterobacteriaceae.

Enterobacteriaceae, Extended-spectrum β-lactamase, E.coli and K. pneumonia.

Presentation: Poster