

Frequency of extended-spectrum Beta-lactamase in *Escherichia coli* and *Klebsiella spp* in neonates.

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OBJETIVES

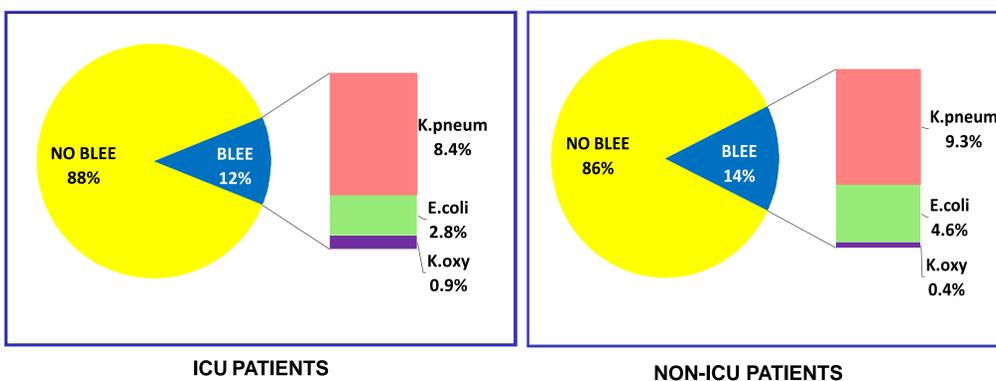
Nosocomial infections caused by multidrug-resistant gram-negative bacilli that produce extended-spectrum beta-lactamase (ESBL) enzymes have been reported with increasing frequency and are responsible for significant mortality and later morbidity among neonatal patients. The aim of this study is to know the rate of colonization by extended-spectrum beta-lactamase-producing (ESBL) *Escherichia coli*, *Klebsiella pneumoniae* or *K. oxytoca* isolates during the period 2008–2011 in patient of the Intensive Care Unit (ICU) of our hospital.

METHODS

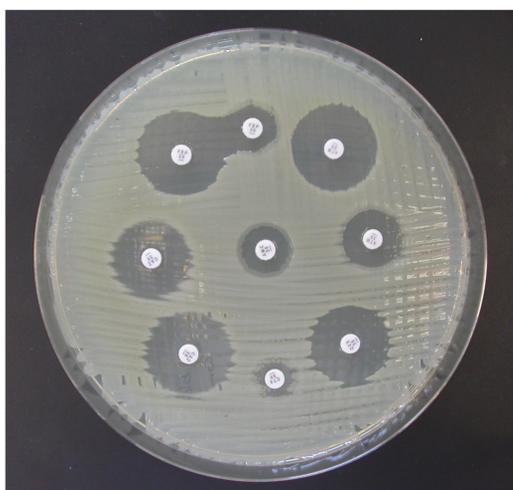
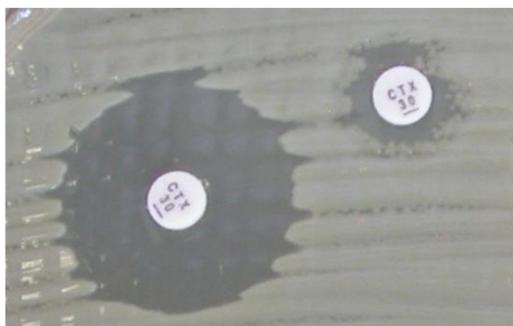
A retrospective study of ESBL-producing *E. coli*, *K. pneumoniae* and *K. oxytoca* isolated from rectal swabs was performed. Subjects were neonates admitted to the neonatal intensive and non-intensive care units admitted at the Hospital Universitario Miguel Servet of Zaragoza (Spain) from from june 2008 to june 2011. 1760 specimens were cultured on McConkey agar supplemented with 1 mcg/ml of cefotaxime. Isolates were identified and tested for antibiotic susceptibility by microdilution system (MicroScan Walkaway® Siemens). ESBL production was confirmed by the double-disk diffusion method according to CLSI standards.

RESULTS

Distribution of ESBL producing bacteria in the different units.



A total of 1760 specimens from 1027 patients were collected during the study, 321 (31.3%) were from patients admitted at ICU and 706 (68.7%) from non-ICU patients. The percentage of ESBL-positive isolate recovery from the ICU-patients were: 8.4% (27), 2.8% (9) and 0.93% (3) for *K. pneumoniae*, *E. coli*, and *K. oxytoca*, respectively. The percentages of isolates from the non-ICU patients were 9.3 % (66), 4.6% (33), and 0.42 % (3) for *K. pneumoniae*, *E. coli*, and *K. oxytoca* respectively.



CONCLUSIONS

ESBL producing *K. pneumoniae* was the most frequent isolated species from patients of the neonatal units. No important differences were detected in colonization rates among ICU and non-ICU group. The identification in these units is essential for adoption of adequate preventive measures.