

Title: EXTENDED-SPECTRUM-BETA-LACTAMASE PRODUCING Enterobacteriaceae RELATED URINARY TRACT INFECTION IN RENAL TRANSPLANT RECIPIENTS: FREQUENCY AND RESISTANCE PROFILE

Authors: Rodrigues, F.C.B¹, Macedo, L.S², Silva-Cavalcanti, P.G.³, Araújo, A.A.⁴, Mesquita, A.R.C.³

Institutions: ¹ ASCES - Associação Caruaruense de Ensino Superior (Avenida Portugal, 584, Bairro Universitário- Caruaru - PE – Brazil), ²HMAR – Hospital Militar de Área do Recife (Rua do Hospício, 563 - 50050-050 - Boa Vista, Recife - PE, Brazil), ³UFPE - Universidade Federal de Pernambuco (Avenida Professor Moraes Rego, 1235 – 50670-901- Cidade Universitária, Recife – PE, Brazil), ⁴ LMJPS-Laboratório Municipal Julião Paulo da Silva (Rua Major Codeceira, 194 - Santo Amaro, Recife-PE, Brasil)

Abstract:

Urinary tract infections (UTIs) represent the first cause of bacterial infections in KIDNEY transplant recipients. These patients develop UTIs more than the general population, the frequency depends on many factors such as age and gender of kidney transplant recipient, kidney function and co-morbidities, immunosuppression and period after kidney transplantation. The immunosuppression in kidney transplant recipients is a risk factor for urinary tract infections. In this group, the prevalence of these infections is 80%, being *E. coli* the most frequently isolated pathogen. This fact becomes important because studies have shown that this species is the main carrier of genes that codify beta-lactamase spread spectrum, an enzyme that confers resistance to most beta-lactams. The resistance to antibiotics in members of Gram-negative Enterobacteriaceae has increased tremendously worldwide; highlighted by the emergence of extended spectrum beta-lactamase (ESBL). Factors leading to the development of UTI in colonized recipients, and the factors associated with recurrent UTIs need to be determined. File lab reports of ASCES School between January 2012 and March 2014 were analyzed. During the study period were analyzed 202 urine samples which 63 samples were positive for enterobacteria. Among these positive samples, 28.57% (18) were positive for ESBL. The most frequently isolated bacteria were *E. coli* (50%), followed by *K. pneumoniae* (11.1%) and *K. oxytoca* (5.5%). With respect to the resistance profile, the ESBL positive strains showed 100% resistance to beta-lactams. The prevalence of ESBL-positive enterobacteria found in this study was high, and *E. coli* was the most commonly isolated bacteria. However, more studies should be done by linking bacterial resistance and the transmission of this kidney transplant recipients.

Key words: antibiotic resistance, Enterobacteriaceae, extended spectrum b-lactamase, kidney transplant, urinary tract infections