

## Urinary Tract Infections Caused by Carbapenem-Resistant Enterobacteriaceae among Elderly Patients

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### ABSTRACT

**Introduction – Objective:** Carbapenem-resistant urinary tract infections have emerged worldwide. They can cause serious health problems especially in the aging patient.

The primary objective of this study is to describe epidemiological, clinical, paraclinical and therapeutic characteristics of these infections in the elderly.

**Methods:** We conducted a retrospective descriptive study in the CHU Taher Sfar Mahdia on about 13 elderly patients diagnosed with carbapenem-resistant urinary tract infections during the period from January 2015 to April 2018.

**Results:** There were 13 patients (5 men and 8 women) with a median age of 69.3 years. More than half (53.8%) were hospitalized in the intensive care unit. Comorbidities were dominated by diabetes (69.2% of cases). We had noted an anterior urinary tract infection in 8 cases, and antibiotic therapy in the last 6 months in 11 cases, previous hospitalization in 10 cases, a history of invasive urological procedure in 8 cases, urolithiasis in 4 cases and chronic renal disease in 2 cases. The clinical presentation was variable. General signs were dominated by alteration of general health condition (69.2%) and disorders of consciousness (46.1%). The physical examination showed a fever in 10 cases and lumbar pain in 6 cases. Eight patients were in sepsis.

Biologically, leukocytosis and elevated CRP were found in 53.8% and 69.2% of cases, respectively. The most isolated organisms were *Klebsiella pneumoniae* (53.8%) and *Enterobacter cloacae* (38.4%).

Their antibiotic susceptibility was: 100% for colimycin, 92.3% for amikacin, 84.6% for fosfomicin, 61.5% for tigecycline and 15.3% for sulfamethazole-trimethoprim and gentamicin. The evolution was favorable in 9 cases.

**Conclusion :** The resistance of uropathogens to carbapenems is a public health threat, particularly in the geriatric population. Their prevention is based essentially on the rational use of antibiotics.