

Accepted Manuscript

Title: Molecular Epidemiology of Carbapenem-Resistant *Klebsiella pneumoniae* at a Turkish Center: Is the Increase of Resistance a Threat for Europe?

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PII: S2213-7165(17)30134-0
DOI: <http://dx.doi.org/doi:10.1016/j.jgar.2017.06.012>
Reference: JGAR 458

To appear in:

Received date: 27-3-2017
Revised date: 15-6-2017
Accepted date: 21-6-2017

Please cite this article as: Aslıhan Candevir Ulu, Tülin Güven Gökmen, Filiz Kibar, Behice Kurtaran, Cansu Önlü, Ferit Kuşçu, Ayşe Seza İnal, Süheyla Kömür, Akgün Yaman, Hasan Salih Zeki Aksu, Yeşim Taşova, Molecular Epidemiology of Carbapenem-Resistant *Klebsiella pneumoniae* at a Turkish Center: Is the Increase of Resistance a Threat for Europe? (2017), <http://dx.doi.org/10.1016/j.jgar.2017.06.012>

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<AT>Molecular Epidemiology of Carbapenem-Resistant *Klebsiella pneumoniae* at a Turkish Center: Is the Increase of Resistance a Threat for Europe?

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<ABS-HEAD>Highlights ► Multiple resistance mechanisms were present at *K.pneumoniae* isolates. ► Most of the isolates produced OXA-48, followed by VIM and SME carbapenemase while the NDM rate was 20.4% ► The most effective antibiotics were tigecycline and colistin.

<ABS-HEAD>Abstract

<ABS-P><ST>Introduction</ST> In recent years carbapenem resistant *Klebsiella pneumoniae* has become an important threat to hospitalized patients. Our aim in this study was to identify the genetic mechanisms of carbapenem resistance in our center.

<ABS-P>Materials and

<ABS-P><ST>Methods</ST> In this study, a total of 98 *K. pneumoniae* isolated from patients who registered at Cukurova University Balcali Hospital and determined phenotypically carbapenem resistant were screened for genotypic presence of carbapenemase enzymes with the multiplex-PCR in the period of 2013-2014.

<ABS-P><ST>Results</ST> Of the 98 patients for whom genetic investigation made, 93 (94.8%) were adults, 56 (57.1%) were male and 81 (82.7%) were diagnosed as infected. Mean and median ages were 51.8±20.5 years and 55 (range 1-89) years. 87.8% of these infections were nosocomial. The mortality of the patients was 41.8% (n=41). Fifty-eight patients (59.2%) were admitted to intensive care units. Five of the 12 non-nosocomial infections were originated from the inpatient clinic of urology department. Median length of stay (LOS) was 17 (range 0-90) days and mean LOS was 20.7±20.8 days. The most common carbapenemase gene was detected as OXA-48 followed by VIM and SME. The detection rates were 74.5%, 45.9% and 37.8% subsequently. NDM gene rate was 20.4% (n=20). The most effective antibiotics were tigecycline and colistin. Susceptibilities were 87.5% and 74.3% respectively.

<ABS-P>

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