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BATTERIOLOGIA

CARBAPENEMASES PRODUCING ENTEROBACTERIACEAE ISOLATED FROM PATIENTS ATTENDING THE CYSTIC FIBROSIS IN REFERENCE CENTER – UNIVERSITY HOSPITAL "POLICLINICO UMBERTO I"- ROME

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INTRODUZIONE

It is known members of Enterobacteriaceae play a minor role in the infection of the respiratory tract in cystic fibrosis (CF) patients. However, given the spread of Carbapenem-Resistant Enterobacteriaceae (CRE) and considering that CF patients are often hospitalized for medical care or observation placed, the possible colonization of these patients was addressed in the framework of CRE surveillance activity planned by our hospital.

METODI

One-hundred-ninety-five hospitalized CF patients attending to Regional Centre of CF were examined for CRE colonization from January 2017 until August 2019. Specifically, a microbiological analysis of rectal swabs was performed on selective plates for CRE (Brilliance™ CRE Agar, (Oxoid-limited,UK). Colonies growing on the above plates were identified by MALDI-TOF MS (Bruker Corporation, USA) and tested for antimicrobial susceptibility by Vitek2 automated system (Biomerieux, France) and further characterized by immunocromatografic test (CARBA 5, NG Biotech, France).

RISULTATI

Twenty-two patients (11.4 %) were positive for CRE in rectal swabs (10 male/12 female, median age: 38.2); all isolates were identified as Klebsiella pneumoniae. Analyzing the antimicrobial susceptibility, isolates were confirmed to be resistant to carbapenems, showing a KPC genotype. As regards to other antibiotics, 16 strains were susceptible to colistine, 7 to gentamicin, and 14 to tigecycline. Of the 22 positive patients, 9 (40.9%) were found positive for K.pneumoniae KPC also in respiratory specimens, with the same pattern of antibiotics susceptibility. Considering other variables, it is worth noting that: 10 (45.5%) patients underwent lung transplant or were followed by different wards of the same hospital and 11 (50%) were diabetics. Remarkably, 8 (36.4%) patients became negative for rectal CRE colonization during the period of screening.

CONCLUSIONI

These data, which have to be confirmed/extended, suggest that, although CF patients are followed-up in dedicated wards by dedicated hospital personnel, a careful and continuous CRE surveillance activity should be performed to prevent a serious infection.