P096

BATTERIOLOGIA

MULTI-DRUG RESISTANT ENTEROBACTERIACEAE IN HEMATOLOGICAL PATIENTS: SURVEILLANCE REPORT 2015-2018.

R. Calemma [1], A. Minopoli [1], F. Labonia [1], S. Liotti [1], P.C. Fiorillo [1], E. Cavalcanti [1]

[1]*Laboratory Medicine Unit, Istituto Nazionale Tumori "Fondazione G. Pascale" - IRCCS, Napoli, Italy*

INTRODUZIONE

The World Health Organization (WHO) and European Centre for Disease Prevention and Control (ECDC) have defined antibiotic resistance as "one of the major threats to public health" and have pointed out the need of national and international surveillance for improvement of antibiotic prescription. Surveillance report include sensitivity tests of human pathogens and periodic monitoring of fecal flora. Multi-drug resistant organisms (MDRO) infection in immunocompromised hematological patients are associated with very high mortality rates. We evaluated the frequency of Enterobacteriaceae isolates from rectal swabs and MDRO incidence in hematological patients admitted to the National Cancer Institute "Fondazione Pascale".

METODI

During a 48 months period (January 2015 to December 2018) 1495 cases of Enterobacteriaceae was isolated. Only MDRO data (n= 482) are included in our surveillance report. The VITEK® 2 Compact automated system (Biomérieux) was used to assess the identification. The antibiotic resistance phenotypes pattern was evaluated by the Kirby Bauer's disc diffusion method (Ciprofloxacin + Cefpodoxime) and the results were interpreted according to EUCAST breakpoints guidelines. Extended spectrum beta-lactamase (ESBL) production was confirmed by BBL CHROMagar ESBL Biplate (Becton Dickinson). Carbapenem resistance was confirmed by Chromatic CRE (Liofilchem Diagnostici) and KPC+MBL Confirm ID Kit (Rosco Diagnostica).

RISULTATI

Of the 482 MDRO 142 (29.6%) were isolated in 2015, 103 (21.3%) in 2016, 114 (23.6%) in 2017 and 123 (25.5%) in 2018. 98 (69%) were Ciprofloxacin resistance microorganism in 2015, 55 (53.3%) in 2016, 73 (64.0%) in 2017 and 55 (44.7%) in 2018. 16 (11.2%) were ESBL in 2015, 6 (5.8%) in 2016, 4 (3.5%) in 2017 and 9 (7.3%) in 2018. 18 (12.6%) were Ciprofloxacin resistance microorganism+ESBL in 2015, 36 (34.9%) in 2016, 31 (27.1%) in 2017 and 50 (40.6%) in 2018; 6 (4.2%) were KPC/MBL in 2015, 2 (1.9%) in 2016, 1 (0.8%) in 2017 and 3(2.4%) in 2018. 1 (0.7%) were Ciprofloxacin resistance microorganism+KPC/MBL in 2015, 2 (1.4%) in 2016, 3 (2.1%) in 2017 and 0 in 2018.

CONCLUSIONI

At 48-mounths, our results show a statistically significant decrease of Ciprofloxacin resistance microorganism (p=0.037), while ESBL, KPC/MBL and Ciprofloxacin resistance microorganism+KPC/MBL are decreased without statistical significance. Moreover we found a significant Ciprofloxacin resistance microorganism+ESBL increase (p=0.00007) at 48-mounths. Therefore the surveillance is crucial to control MDRO's case in immunocompromised hematological patients because the antibiotic resistance still represent a mortality high risk.