

Respiratory infections

0056

Augmenting incidence of respiratory tract infections caused by *Klebsiella pneumoniae* NDM-1 in Internal Medicine Ward

Katarzyna Zycinska¹, Magdalena Wielowieyska¹, Zbigniew Kur¹, Tadeusz Zielonka¹
¹Warsaw Medical University / Szpital CZerniakowski, Department of Family Medicine, Warsaw, Poland

The incidence of *Klebsiella pneumoniae* carbapenem resistance is on the rise. The NDM-1 enzyme gene encoded in plasmids can be transmitted from one bacteria strain to another spreading the resistance. The metallo-beta-lactamase protein allows the bacteria to hydrolyze the core structure of carbapenems, inactivating its" negative effect on the bacterial wall synthesis. The aim of prospective study is to monitor the incidence and severity of *Klebsiella pneumoniae* NDM-1 infections. Since 01.12.2015 up to 01.09.2017 more than 70 cases have been reported. There were 64 cases confirmed for NDM-1 gene by Automatic Vitek Detection System and Carba PCR test. The most common cause of admission to Internal Medicine Ward of Czerniakowski hospital was pneumonia (n=26). Among concomitant diseases were heart failure (n=40), kidney injury (n=26), chronic pulmonary diseases (n=20). *Klebsiella pneumoniae* NDM was present in sputum culture in 10 cases, out of which 7 were recorded in 2017. Furthermore, since 2017, we have noticed a higher incidence of other bacteria carrying NDM gene: two cases of *Pseudomonas aeruginosa* and one of *Acinetobacter baumannii*. Witnessing growing incidence of invasive diseases caused by *K. pneumoniae* NDM, it seems more important than ever to reduce spreading of bacterial resistance by early detection and strict isolation of carriers.