

Category : **Infections + antimicrobials**

A88 - Carbapenemase producing acinetobacter junii – outbreak in a bronchoscopy operation theatre in general university hospital in prague (guh)

G Kroneislová ; J Závora ; V Adámková

General University Hospital in Prague, Clinical Microbiology and ATB Center, Prague 2, Czech Republic

Introduction:

Acinetobacter spp. is one of the pathogens causing hospital-acquired infections. Nowadays, the number of carbapenem-resistant strains is increasing. Colonization and infections caused by these strains can become a problem of our time.

Methods:

If *Acinetobacter* spp. is detected in these materials in GUH, susceptibility to selected antibiotics (co-trimoxazole, ciprofloxacin, gentamicin, amikacin, imipenem and meropenem) is routinely tested by disc diffusion method. If the strain is resistant to carbapenems, carbapenemase production is determined using rapid immunochromatographic test (CARBA-5) and MIC of colistin is determined.

Results:

Between 12/2022 and 5/2023, (VIM-type carbapenemase-producing) *Acinetobacter* spp. was detected in 34 unique BAL or aspirate samples. The strains were identified by MALDI-TOF (mass spectrometry) as *Acinetobacter junii*. All these strains were susceptible only to gentamicin and colistin. CARBA-5 test detected VIM-type carbapenemase in these strains. These results were confirmed in the National reference laboratory (NRL) for antibiotics. The NRL also proved the isolates to be identical by genotyping.

Epidemiological investigation found out that bronchoscopy of all patients colonized with this strain was performed in the same operation theatre. 144 samples were taken from the environment of the bronchoscopy operating theatre and staff. The source of the carbapenemase-producing *Acinetobacter junii* was found in the heating bath for saline solution used in bronchoscopy procedure. Corrective actions were implemented and *Acinetobacter* spp. strain with this resistance phenotype has not been detected since.

Conclusion:

Environmental sampling is essential during outbreaks, but it is also recommended to be done periodically as a prevention of outbreaks. It is crucial to search for the source of the contaminant in adequate areas.