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P1104 The worldwide panorama of the Acinetobacter baumannii group and Stenotrophomas maltophilia in the last 20 years: results from the SENTRY Antimicrobial Surveillance Program (1997-2016)

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Background: Members of the *Acinetobacter baumannii* group (ACBg) and *Stenotrophomonas maltophilia* (SM) are usually multidrug-resistant and represent frequent causes of hospital-acquired infections. We evaluated the frequency and resistance rates of ACBg and SM isolated from medical centres enrolled in the SENTRY Program.

Materials/methods: Between 1997 and 2016, 15,491 ACBg and 6,821 SM isolates (1/patient) were forwarded to a central monitoring laboratory by >200 participant sites located in the Asia-Pacific (APAC), Latin American (LATAM), European (EU), and North American (NA) regions. Species identification confirmation and antimicrobial susceptibility testing (AST) were performed at the monitoring laboratory using conventional methods and/or MALDI-TOF MS, and broth microdilution method, respectively. AST results were interpreted by EUCAST 2017 criteria, except minocycline and ampicillin-sulbactam (SAM), for which CLSI 2017 breakpoints were applied. Susceptibility rates observed in the 1997-2000 and 2013-2016 periods were compared. Colistin and SAM testing started in 2005. Extensively drug-resistant (XDR) ACBg was defined as nonsusceptible (EUCAST) to ≥1 drug of ≥3 of the following classes: aminoglycosides, carbapenems, fluoroquinolones and polymyxin.

Results: ACBg were more frequently isolated from patients hospitalised with pneumonia (PHP; 6,988; 45.1%) and bloodstream infections (BSI; 5,442; 35.1%) in all regions. SM were also more frequently isolated from PHP (3,830; 56.2%) and BSI (2,268; 33.3%). Colistin and minocycline were the most active agents against ACBg (MIC_{50}, ≤0.5 mg/L; 96.4% susceptible) and SM (MIC_{50}, ≤1 mg/L; 99.3% susceptible), respectively. Important decreases in susceptibility rates among ACBg were observed for all antimicrobial agents in all regions, except for SAM in NA (Table). XDR ACBg rates were highest in EU (33.7%), followed by APAC (27.7%), LATAM (23.2%), and NA (15.3%). Among SM, trimethoprim-sulfamethoxazole (TMS) susceptibility rates decreased from 100% in 2005-2008 to 95.6% in 2013-2016, and resistance rates varied according to the geographic region, ranging from 3.5% (APAC) to 8.5% (LATAM) in 2013-2016.

Conclusions: In the last 20 years, we have witnessed important reductions of susceptibility rates to all antimicrobial agents (including carbapenems, and more recently, colistin) in all geographic regions among ACBg isolates. Although TMS-resistant SM have emerged during the study period, overall resistance rates to this association remained low.

Geographic region	ACBg susceptibility (%) stratified by drug and period of time									
	Meropenem[a]		Levofloxacin[a]		Amikacin[a]		SAM[a]		Colistin[a]	
	1997-2000	2013-2016	1997-2000	2013-2016	1997-2000	2013-2016	2005-2008	2013-2016	2005-2008	2013-2016
APAC	87.6	22.0	63.9	20.4	74.6	29.2	35.8	21.2	99.2	95.5
EU	55.7	22.2	24.4	13.7	31.7	22.7	31.5	19.2	99.2	89.6
LATAM	81.3	13.7	23.1	12.4	22.7	17.6	29.3	16.4	99.2	96.6
NA	88.8	55.0	64.4	49.3	83.7	70.0	54.6	59.0	98.4	93.6
All regions	77.0	31.5	41.6	25.8	50.5	37.9	36.2	31.6	99.1	92.6

[a] Percentage susceptible per EUCAST 2017 criteria, except SAM.