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IMPACT OF COLISTIN THERAPY ON MORTALITY OF MULTIDRUG-RESISTANT AND COLISTIN-SENSITIVE ACINETOBACTER BAUMANNII BACTERAEMIA IN CRITICALLY ILL PATIENTS

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BACKGROUND

-Multidrug-resistant *Acinetobacter baumannii* (MDR-Ab) has emerged as a common cause of severe sepsis in critically ill patients. Colistin is the treatment of choice for MDR-Ab. The impact on mortality of empirical therapy with colistin and combined targeted therapy with tigecycline or vancomycin is unknown.

-To investigate the efficacy of the empirical use of colistin and combined targeted therapy with colistin and tigecycline or vancomycin in the treatment of colistin-sensitive MDR-Ab bacteremia in critically ill patients.

MATERIAL/METHODS:

-Multicenter retrospective cohort study. Involving two hospitals belonging to the Spanish Network for Research in Infectious Diseases (REIPI).

-Critical patients with monomicrobial bloodstream infections (BSI) due to MDR-Ab were studied in which specific criteria were applied for the analysis of Colistin empirical therapy (CET) or tigecycline-based or vancomycin-based (plus colistin) combined targeted therapy (CTT).

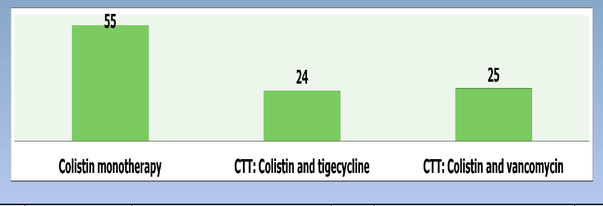
-All-cause 14- and 30-day mortality (crude).

RESULTS

N=113

-55 years (± 17).
-Male sex 62% (N=70)
-Apache II 21 ± 8. Índice de Charlson 2.1 ± 2.

Colistin empirical therapy 60 patients



PATIENTS CHARACTERISTICS ACCORDING TREATMENT ADMINISTERED:

VARIABLES									
	Total (N =113)	Empirical therapy with colistin (N = 60)	No empirical therapy with colistin (N = 53)	p[1]	Colistin monotherapy (N = 55)	Combined therapy (tigecycline + colistin) (N = 24)	p[2]	Combined therapy (colistin + vancomycin) (N = 25)	p[3]
-Age (years), mean ± SD	55 ± 17	56 ± 16	54 ± 18	.615	59 ± 17	56 ± 12	.407	49 ± 17	.020
-Sex (male)	70 (62%)	37 (62%)	33 (63%)	1	34 (62%)	16 (67%)	.686	15 (60%)	.879
*Patient origen at ICU admission:									
-Nosocomial	60 (53%)	28 (47%)	32 (60%)	.187	34 (62%)	13 (54%)	.530	9 (36%)	.032
*Comorbidities:									
-Diabetes mellitus	32 (28%)	17 (28%)	15 (28%)	1	21 (38%)	8 (33%)	.686	2 (8%)	.005
*APACHE II score, mean ± SD	21 ± 8	20 ± 7	22 ± 8	.361	21 ± 7	24 ± 7	.097	17 ± 8	.047
*Charlson Index, mean ± SD	2.1 ± 2	2 ± 2.2	2 ± 1.7	.717	2.1 ± 1.9	2.5 ± 2.4	.426	1.3 ± 2.1	.113
*Death at 14 days	16 (14%)	8 (13%)	8 (15%)	.794	10 (18%)	5 (21%)	.786	1 (4%)	.090
*Death at 30 days[d]	53 (47%)	32 (54%)	21 (39%)	.134	31 (56%)	12 (50%)	.607	9 (37%)	.126

*Mortality day 14: 14% (N =16), administered treatment:
-CET 13%
-CTT: Colistin and tigecycline 21%
-CTT: Colistin and vancomycin 4%

*Mortality day 30: 47% (N=53), administered treatment:
-CET 54%
-CTT: Colistin and tigecycline 50%
-CTT: Colistin and vancomycin 31%

MULTIVARIATE ANALYSES LOGISTIC REGRESSION:

Adjusted odds ratio (95 %) for the different results in the CET and groups of CTT:

	COLISTIN EMPIRICAL THERAPY[A].	TIGECYCLINE-BASED COMBINED TARGETED THERAPY[B].	VANCOMYCIN-BASED COMBINED TARGETED THERAPY[B].
14-day mortality	1.15 (0.33-4.03)	1.28 (0.32-5.17)	0.19 (0.2-2.35)
30-day mortality	2.29 (0.95-5.51)	6.56 (0.66-65.22)	5.52 (0.51-59.72)

[a]Empirical therapy with colistin vs. without colistin. [b]Combined targeted therapy vs. monotherapy with colistin.

CONCLUSIONS

CET and tigecycline-based or vancomycin-based CTT with colistin do not decrease 30- and 14-day crude mortality of BSI due to MDR-Ab in critical patients.