ANTIMICROBIAL PPS – POINT PREVALENCE SURVEY

GLOBAL-PPS
Antimicrobial Consumption and Resistance

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BACKGROUND & PURPOSE

Antimicrobial resistance has become a global challenge in health care and is usually associated with poor antibiotic-prescribing patterns. We sought to determine the rate and characteristics of antibiotic prescription in order to design future Targeted antimicrobial stewardship interventions

MATERIAL AND METHODS

A point prevalence survey was carried out in the framework of the multi-center study of international prevalence Global PPS 2017 (www.globalpps.com) in November 2017.
The study was conducted from the analysis of all prescriptions of active antibiotics at 8: 00h AM at the hospital in a single day.
A descriptive study (frequency and percentage) of the variables explored was carried out.

GLOBAL-PPS PATIENT Form (Please fill in one form per patient on antimicrobial treatment/prophylaxis)

Ward Name/code	Activity [1] (M, S, IC)	Patient Identifier [2]	Survey Number [3]	Patient Age [4]			Weight In kg, 2 decimals	Gender M or F
				Years (if ≥ 2 years)	Months (1-23 month)	Days (if <1 month)		
Hemato – D4	M	12345678		16			51.5	M

Antimicrobial Name [5]		1. Meropenem		2. Co-trimoxazole		3. Teicoplanin		4. Amikacin		5.
Single Unit Dose [6]	Unit (g, mg, or IU) [7]	770	mg	480	mg	400	Mg	500	mg	
Doses/ day [8]	Route (P, O, R, I) [9]	3	P	1	O	1	P	1	P	
Diagnosis [10] (see appendix ll)		Sepsis		MP		Sepsis		Sepsis		
Type of indication [11] (see appendix III)		HAI2		MP		HAI2		HAI2		
Reason in Notes (Yes or No) [12]		No		No		No		No		
Guideline Compliance (Y, N, NA, NI) [13]		N		Y		Y		Y		
Is a stop/review date documented?(Yes/No)		No		No		No		Yes		
Treatment (E: Empirical; T: Targeted)		T		E		T		T		
The next section is to be filled in only if the treatment choice is based on microbiology data (Treatment=targeted) AND the organism is one of the following										
MRSA (Yes or No) [14]				Yes						
MRCoNS (Yes or No) [15]										
VRE (Yes or No) [16]										
ESBL-producing Enterobacteriaceae (Yes or No) [17]		Yes						Yes		
3rd generation cephalosporin resistant Enterobacteriaceae non-ESBL producing or ESBL status unknown (Yes or No)										
Carbapenem-resistant Enterobacteriaceae (Yes or No) [18]										
ESBL-producing non fermenter Gram-negative bacilli (Yes or No) [19]										
Carbapenem-resistant non fermenter Gram-negative bacili (Yes or No) [20]										
Targeted treatment against other MDR organisms (Yes or No) [21]										

Treatment based on biomarker data (Yes or No)	X Yes – 0 No				
If yes, which biomarker (CRP, PCT or other)[22]	CRP	Type of biological fluid sample (Blood/urine/other)	Blood	Most relevant value of biomarker on the day of the PPS	
				Value	Unit (in µg/L, mg/L, ...)[23]
				215	mg/L

RESULTS

Of 174 patients eligible for the study, quality indicators for antimicrobial prescriptions were: compliance with institutional guidelines: 100%, 62.3% and 57.8% (p<.01); reason given for prescribing in patient case notes: 50%, 83% and 85.3% (p<.01); antibiotic duration documented in medical chart: 14.3%, 7,5% and 13.8% (p=.498) and targeted treatment:28.6%, 34% and 32.1% (p=.922) for ICU, medical and surgical departments respectively.

There were therapeutic indications in 129 of the prescriptions, of which 22.5% were for skin and soft tissue infections followed by 15.5% complicated urinary tract infections and 9.3% pneumonia. Amoxicillin-clavulanate was the most prescribed antibiotic for treatment and prophylaxis purposes (48.1 and 29.8% respectively). According to syndrome worst guideline compliance was observed in complicated urinary tract infections 57.9% and skin and soft tissue infections (65.5%)

CONCLUSIONS

In our setting, adequate acquisition definition, compliance to local guidelines, obtaining of microbiological samples and certain clinical syndromes (skin and soft tissue and urinary) were the main variables identified to prioritise ASP targeted intervention.

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