P1055
Poster Session IV
Resistance surveillance in Gram-negatives

EPIDEMIOLOGY AND SUSCEPTIBILITY OF PATHOGENS FROM HOSPITAL- AND COMMUNITY-ASSOCIATED URINARY TRACT INFECTION IN TURKEY: SMART 2011-2012

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Objectives: Regional empiric therapy guidelines need to take local antibiograms and pathogen prevalence data into account. The Study for Monitoring Antimicrobial Resistance Trends (SMART) has monitored Gram-negative pathogens (GNP) from urinary tract infections (UTI) since late 2009. These data may prove useful in development of empiric therapy guidelines. This report from SMART summarizes occurrence and susceptibility of pathogens (including extended-spectrum β-lactamase [ESBL] producers) in hospital- (HA) and community-associated (CA) UTI in Turkey in 2011-2012.

Methods: Six laboratories in Turkey each collected up to 50 consecutively isolated GNP per year from patients with UTI. Susceptibility and ESBL phenotypes for 363 GNP were determined using CLSI broth microdilution. A UTI was defined as HA or CA if cultured >=48 hours or <48 hours post-admission, respectively.

Results: HA UTI were caused by 14 species (40% *Escherichia coli*, 23% *Klebsiella pneumoniae*), while 9 species were found in CA infections (74% *E. coli*, 13% *K. pneumoniae*). ESBL rates in HA and CA UTI were 50% and 38%, respectively, for *E. coli,* and 44% and 42%, respectively, for *K. pneumoniae*. Susceptibility is shown below for *E. coli* and *K. pneumoniae*, as well as for all GNP combined, using breakpoints appropriate for each species (0% susceptible assumed for species with no breakpoints for any given drug). Values >=90% are bolded, HA-CA differences >=10% are shaded grey.

ETP=ertapenem, IPM=imipenem, AMK=amikacin, FEP=cefepime, CTX=cefotaxime, FOX=cefoxitin, CAZ=ceftazidime, CRO=ceftriaxone, CIP=ciprofloxacin, LVX=levofloxacin, SAM=ampicillin-sulbactam, TZP=piperacillin-tazobactam.

	n	ETP	IPM	AMK	FEP	CTX	FOX	CAZ	CRO	CIP	LVX	SAM	TZP
E. coli													
HA	109	**97**	**100**	**96**	54	49	**96**	59	50	50	50	22	83
CA	68	**99**	**100**	**97**	60	59	**93**	68	59	62	62	32	78
K. pneumoniae													
HA	61	80	87	**95**	61	48	80	62	56	64	70	28	64
CA	12	**100**	**100**	83	67	58	**100**	58	58	58	67	42	75
All Gram-negative													
HA	271	76	81	**90**	61	45	64	63	46	61	63	20	69
CA	92	**97**	**97**	**96**	64	58	**90**	70	55	62	63	33	75

Conclusion:

- Compared to CA UTI, HA UTI was caused by a greater variety of species and by a smaller proportion of *E. coli.*
- ESBL rates in *E. coli* were much higher in HA than CA infections in Turkey, while the rates for *K. pneumoniae* were similar in the two types of infection (but n's were smaller). Both species' ESBL rates were high compared to those reported previously from SMART in most other countries.
- Susceptibility was almost always lower in HA UTI than in CA infections, including *K. pneumoniae* for which the ESBL rate was not much worse in HA infections.
- Options for empiric UTI therapy are limited in Turkey, especially in HA infections. Overall fluoroquinolone susceptibility rates of ~60% limit their utility as empiric agents in IAI in Turkey. Of the drugs studied, only amikacin was active against >=90% of both HA and CA pathogens, and ertapenem, imipenem and cefoxitin against >=90% of CA pathogens.