Epidemiology and Infection

Title: Epidemiology and Genotypic Characterization of Dissemination Patterns of Uropathogenic *Escherichia coli* in a Community

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Table S1. Age and Antimicrobial Resistance of *E. coli* isolates According to Sequence Types and Closely Related Groups.

Classification (no. of strains)	Age, median (range)[a]	Drug resistance % (no. of strains)[b,c]	Tested drugs[d]													
			PCs	**C1**	**C2**	**C3**	**C4**	**OC**	**CM**	**Mon**	**CaP**	**AGs**	**TCs**	**ST**	**FQs**	**FOM**
All STs (166)	64 (16-90)	22.3 (37)	15.7 (26)	3.0 (5)	2.4 (4)	10.2 (17)	1.2 (2)	0	0	2.4 (4)	0	4.8 (8)	1.8 (3)	5.4 (9)	7.8 (13)	0.6 (1)
non HIF STs (66)	68.5 (16-90)	27.3 (18)	16.7 (11)	0	1.5 (1)	10.6 (7)	0	0	0	1.5 (1)	0	6.1 (4)	4.6 (3)	4.6 (3)	3.0 (2)	0
SIF STs (37)	70 (16-90)	24.3 (9)	13.5 (5)	0	2.7 (1)	10.8 (4)	0	0	0	0	0	5.4 (2)	5.4 (2)	3.1 (3)	2.7 (1)	0
MIF STs (29)	64 (16-90)	31.0 (9)	20.7 (6)	0	0	10.3 (3)	0	0	0	3.5 (1)	0	6.9 (2)	3.5 (1)	0	3.5 (1)	0
ST3510, CRG A (2)	46 (22-70)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HIF STs (100)	62 (17-90)	19.0 (19)	15.0 (15)	5.0 (5)	3.0 (3)	10.0 (10)	2.0 (2)	0	0	3.0 (3)	0	4.0 (4)	0	6.0 (6)	11.0 (11)	1.0 (1)
ST95 (48)	58.5 (17-90)	9.3 (4)	6.33 (3)	0	0	2.1 (1)	0	0	0	0	0	0	0	4.2 (2)	2.1 (1)	0
CRG H (12)	56 (20-90)	8.3 (1)	0	0	0	0	0	0	0	0	0	0	0	8.3 (1)	8.3 (1)	0
CRG D (5)	55 (46-74)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRG E (3)	68 (64-77)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRG F (3)	18 (17-59)	33.3 (1)	33.3 (1)	0	0	0	0	0	0	0	0	0	0	0	0	0
CRG G (3)	61 (47-84)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRG C (2)	27 (23-31)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRG I (2)	68.5 (64-73)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ST131 (20)	67 (20-85)	65.0 (13)	55.0 (11)	20.0 (4)	15.0 (3)	40.0 (8)	10.0 (2)	0	0	10.0 (2)	0	20.0 (4)	0	20.0 (4)	50.0 (10)	5.0 (1)
CRG B (3)	75 (70-82)	100.0 (3)	33.3 (1)	0	0	0	0	0	0	0	0	0	0	33.3 (1)	100 (3)	33.3 (1)
ST73 (17)	67 (34-84)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRG J (4)	62.5 (45-84)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRG K (30)	66 (62-67)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ST357 (15)	71 (30-84)	13.3 (2)	6.7 (1)	6.7 (1)	0	6.7 (1)	0	0	0	1 (6.7)	0	0	0	0	0	0

Antimicrobial susceptibility of *E. coli* isolates was determined by the Microscan system using NBP3J, which included the following classes of antibacterial agents (the tested drugs within each): PCs, amino- and acylamino-penicillins (ampicillin, piperacillin); C1, 1st generation cephalosporins (cefazolin); C2, 2nd generation cephalosporins (cefotiam, cefaclor); C3, 3rd generation cephalosporins (cefotaxime, ceftazidime, cefoperazone, cefpodoxime); C4, 4th generation cephalosporins (cefepime, cefpirome, cefozoplan); OC, oxacephems (latamoxef, flomoxef); CM, cephamycins (cefmetazole); Mon, monobactams (aztreonam); CaP, carbapenems (imipenem, meropenem); AGs, aminoglycosides (gentamicin, tobramycin, amikacin, isepamicin): TCs, tetracyclines (minocycline); STs, folate path inhibitor (trimethoprim-sulfamethoxazole); FQs, fluoroquinolones (levofloxacin, ciprofloxacin); FOM, fosfomycin (fosfomycin). HIF indicates high-isolation-frequency; MIF, middle-isolation-frequency; SIF, single-isolation-frequency; CRG, closely related group. [a] For the comparison between Non-HIF STs and ST95; $p = 0.0135$, Wilcoxon's signed- ranks test. [b] Strains that defined resistant to any of tested drugs were regarded as to have drug resistance. [c] The drug resistant rate of ST95 and ST73 (ST131) are significantly low (high) compared to that of Non-HIF STs, $p = 0.0153$ and 0.0094 (0.0033), respectively.

Table S2. Chi-squared goodness of fit test for actual and theoretical frequencies of the isolates per week according to Poisson distribution.

Classification (No. of strains)	mean frequency per week	No. of isolates	Actual frequency	Probability for Poisson Distribution*	Theoretical frequency	Value of Chi square	Probability
All (166)	3.132	0	1	0.0436	2.312	6.124	0.523
		1	5	0.1367	7.242		
		2	17	0.2140	11.342		
		3	12	0.2234	11.841		
		4	6	0.1749	9.271		
		5	8	0.1096	5.808		
		6	2	0.0572	3.032		
		7	1	0.0256	1.356		
		8	1	0.0100	0.531		
		9	0	0.0035	0.185		
		10	0	0.0011	0.058		
HIF (100)	1.887	0	10	0.1515	8.031	5.403	0.369
		1	11	0.2859	15.154		
		2	15	0.2698	14.298		
		3	13	0.1697	8.993		
		4	1	0.0801	4.243		
		5	2	0.0302	1.601		
		6	1	0.0095	0.504		
MIF (29)	0.547	0	30	0.5787	30.670	0.452	0.798
		1	17	0.3165	16.777		
		2	6	0.0866	4.588		

SIF (37)	0.698	0	25	0.4976	26.372	0.923	0.820
		1	21	0.3473	18.407		
		2	5	0.1212	6.424		
		3	2	0.0282	1.495		
ST95 (48)	0.906	0	22	0.4041	21.419	1.694	0.638
		1	17	0.3661	19.406		
		2	11	0.1659	8.791		
		3	3	0.0501	2.655		
ST131 (20)	0.377	0	38	0.6859	36.354	2.081	0.556
		1	11	0.2586	13.705		
		2	3	0.0487	2.583		
		3	1	0.0061	0.325		
ST73 (17)	0.32	0	40	0.7261	38.486	3.463	0.326
		1	10	0.2324	12.315		
		2	2	0.0372	1.970		
		3	1	0.0040	0.210		
ST357 (15)	0.283	0	40	0.7535	39.937	0.109	0.947
		1	11	0.2132	11.302		
		2	2	0.0302	1.599		

*, probabilities for each value of the variables were calculated using the Poisson formula of $e^{-\mu}\mu^{r}/r!$, where μ is the mean of frequencies and r is the number of events. HIF indicates high-isolation-frequency; MIF, middle-isolation-frequency; SIF, single-isolation-frequency.