

Antibiotic resistance of *Escherichia coli* in 312 non-hospitalised nursing home acquired Urinary tract infection.

**Daniel DYE,, Fabrice GUERBER, Jacques CHOUTEAU and
Gaetan Gavazzi**
Univeristy of **Grenoble-Alpes, France**



CONFLICT OF INTEREST DISCLOSURE

I have no potential conflict of interest to report
For this presentation

Background

Urinary tract infection = major infection in Nursing home

Antibiotic-therapy in Nursing Home vary from 2-10%.

UTI is the number reason for empirical use, Prophylactic use
of ATB

Inappropriate empirical therapy in a high-risk population
40-60%

Leads to the risk of emerging resistance / Highly variable

Background

E coli is the main bacteria responsible for UTI and bacteraemia and takes part of Intestinal flora in older population.

Hypothesis

The surveillance of *E coli* antibiotic susceptibility is of clinical importance and may represent an overview of ATBic susceptibility in NH.

Aim of the study

Analyse ATBic resistance of *Escherichia coli* in urine culture collected in 12 NH of the same French area.

Methods

EU
INTERNATIONAL CONGRE
DEVELC
ACTION



Retrospective study From 03 2014 to 09 2015
Bacteriological analysis from urine sample
Community private laboratory

GRUPE
**Oriade
noviale**
Laboratoires de biologie médicale
www.oriade-noviale.fr

All positive performed in 12 NH because of UTI suspicion.

All urine cultures positives for *E. coli*

All usual antibiotics were tested.

(penicillin/ cephalosporin/ Aminositides, furan / fosfomycin)
for C3G resistance , Cephalosporinasis and ESBL differenciation



Results

Uricult number	Positive Uricult (%)	Positive for <i>E. coli</i>	<i>E. coli</i> Rate %	<i>E. coli</i> with ESBL
167	95 (56.9%)	29	30.5%	3 (11%)
160	79 (49.4%)	31	39.3%	-
57	38 (66.6%)	12	31.6%	-
193	112 (58%)	34	30.4%	2 (5.5%)
187	108 57.8%	30	28.6%	1 (3.3%)
137	87 (63.5%)	37	42.5%	1 (2,7)
129	78 (60.5%)	31	39.7%	1 (3,2)
102	74 (72.5%)	30	40.5%	-
59	30 (50.8%)	7	23.3%	-
35	19 (54.9%)	9	47.4%	-
178	138 (77.5%)	45	32.6%	4 (9.5%)
59	46 (77.9%)	17	36.9%	-
1463	904 (61.8%)	312	34.5%	12 (3.8%)

2

2014 to 09 2015

Antibiotic resistances

N= 312

Amoxicillin	52%,
Amoxicillin+ clavulanate	34%
Ceftriaxone	11,8%
Cefexime	14,1%
Ciprofloxacin	17.9%
Imipenems,	0 %
Gentamycin,	2.2
Furane	1,9
Fosfomycin	2,5
Global ESBL <i>E coli</i> :	3.8 %

However 2 Nursing homes with ESBL *E coli* rate 10%

Discussion / Conclusion

Regarding the high level of resistance Amoxicillin, coamoxiclav can no longer be used as empirical treatment;

Of concern, resistance to 3rd cephalosporin generation, becoming higher than one at the university Hospital of the area. ESBL was already very high in some NH

This suggests that NH may act as a reservoir of multidrug resistance bacteria and A risk of cross transmission

Yet, Surveillance of the resistance is critical in NH to better guide the empirical therapy.

The most simple and frequent Is Urinculture

Thank you for your Attention

.....too less....



.....or too much



“The good physician treats the disease; the great physician treats the patient who has the disease.”

William Osler

