

Spontaneous resistance to temocillin, an old and rarely used antibiotic indicated for the treatment of multiresistant Enterobacteriaceae infections : a case report



CP-140

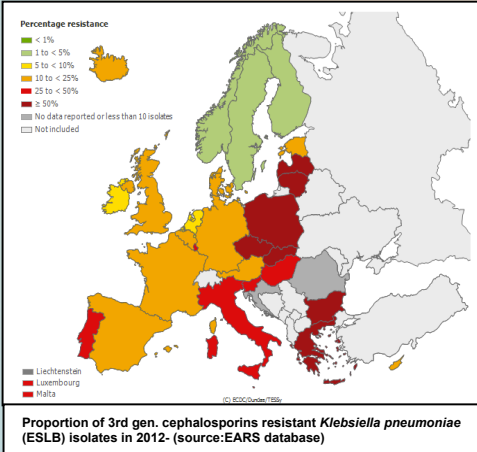
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Background

Extended spectrum beta-lactamase (ESBL) producing Enterobacteriaceae are spreading in Europe



CARBAPENEM
Effective antibiotics

But

Emergence of resistant carbapenemase producing strains



Marketed in:
United Kingdom
Belgium
France

Only delivered on approval from the national agency for drugs= limited use of in France

TEMOCILLIN

Old and rarely used antibiotic
A beta-lactam antibiotic derivative of ticarcillin
High beta-lactamase stability

Effective and relevant alternative to carbapenem

Low levels of minimum inhibitory concentrations (MIC) expected

Purpose

To describe a case of spontaneous resistance to temocillin

Materials and Methods



A 78 years old man hospitalized in intensive care unit because of several infectious episodes

- Review of medical record
- Focus on drug treatments and microbiologic laboratory results
- In the light of temocillin bibliography and multidrug resistance bacteria literature data



Results

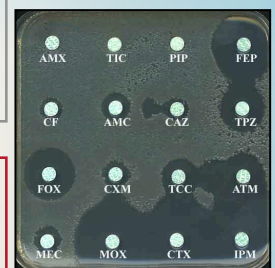
The patient is colonized by a nosocomial multiresistant ESBL and cephalosporinase-producing *Klebsiella pneumoniae* which caused septicemia



- ⊕ First treated with carbapenem but
- ⊕ To spare carbapenem in case of further infections
- Susceptibility test of the strain to temocillin realised

High MIC value of 96 µg/mL (usual range between 8-32 µg/mL)

Resistance of the strain to the alternative antibiotic



Conclusions

- Temocillin was found resistant to ESBL-producing *Klebsiella pneumoniae* while sensitivity was expected
- This underlines the necessity of a careful antibiotic stewardship in complicated cases and multi-drug resistance, keeping in mind that drugs saved as spare alternatives may not demonstrate the expected efficacy in contaminated environments.
- This potential limitation of therapeutic options should always be anticipated to avoid that antibiotic therapy is no longer an option for our infectious patients.