Abstract (poster session)

**Antimicrobial susceptibility testing against multi-resistant Enterobacteriaceae isolates**
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Objectives: The number of infections due to multiresistant Enterobacteriaceae is rising. Mechanisms of resistance can be production of extended-spectrum beta-lactamase (ESBL), AmpC beta lactamase, carbapenemase or impermeability of antibiotics. Treatment options are scanty and therefore ‘forgotten’ antibiotics have recently been reconsidered. Treatment alternatives comprise fosfomycin, colistin, nitrofurantoin, chloramphenicol and tigecycline. A rather unknown alternative might be temocillin which has a remarkable beta-lactamase stability and resilience to all classical extended-spectrum TEM, SHV and CTX-M enzymes. There is little clinical experience for temocillin treatment of multiresistant till now. Methods: Multiresistance was defined as being susceptible to only one class of first-line antimicrobials (penicillins, cephalosporins, quinolones and carbapenems) and being intermediate or resistant to all classes of second-line antimicrobials (aminoglycosides, tetracycline, co-trimoxazole and tigecycline) or as being intermediate or resistant to first-line antimicrobials (susceptibility to second-line antimicrobials not relevant). Phenotypically multidrug-resistant strains were further characterized and tested for their antimicrobial susceptibility against several antibiotics of reserve. Results: The production of ESBL, AmpC beta lactamase, carbapenemase or impermeability of antibiotics were detected among the multiresistant strains using CLSI methodology and molecular diagnosis. Antimicrobial susceptibility testing revealed different patterns of resistance among the tested strains. There was no clear association between the mechanism of resistance and the antimicrobial susceptibility testing. Conclusion: The results of our study for in vitro susceptibility testing of multiresistant Enterobacteriaceae strains show that in case of multiresistance even ‘forgotten’ antibiotics should be taken into consideration. Tigecycline, fosfomycin and colistin are antibiotics which are already frequently used as treatment alternatives. Nitrofurantoin, chloramphenicol and temocillin seem to be less frequently used. Especially temocillin might be a promising treatment option if tested susceptible.