27th ECCMID Vienna, Austria 22 – 25 April 2017
The congress of ESCMID

Session: EV023 Pharmacoepidemiology, improved prescribing and antibiotic stewardship

Category: 5d. Pharmacoepidemiology, improved prescribing and antibiotic stewardship

22 April 2017, 08:45 - 15:30
EV0435

Patients tolerate switch from IV to oral antibiotics in acute bacterial skin and skin structure Infections (ABSSSI) earlier than European physicians may predict

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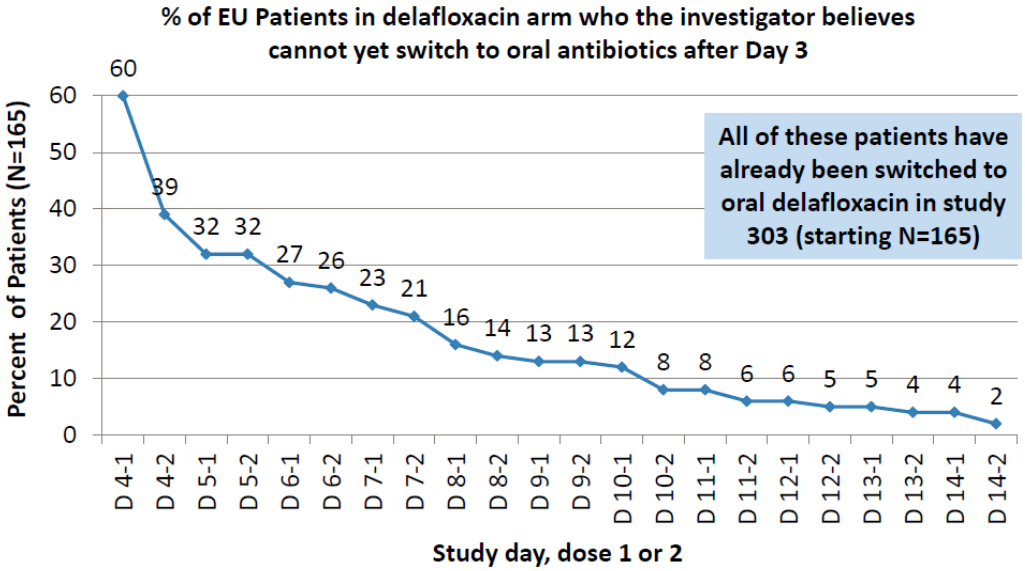
Background: A key parameter in antibiotic stewardship is the daily patient assessment for potential switch from IV to oral antibiotics to facilitate earlier hospital discharge. The evaluating physician must recognize the potential for their patient to make that switch. We compared the physician's perception of the ability to switch a patient from IV to oral versus the reality, using European data collected in a blinded phase 3 ABSSSI trial of IV and oral delafloxacin, an anionic fluoroquinolone. The IV and oral dosage forms of delafloxacin provide comparable exposure which allows IV to oral switch.

Material/methods: Multicenter, randomized trial of adults with ABSSSI (study 303). Patients were randomized 1:1 to receive BID delafloxacin (DLX) 300 mg IV for 3 days with a mandatory blinded switch to 450 mg oral DLX BID on day 4, or vancomycin/aztreonam IV combination therapy, for 5-14 days. All patients were treated in a double blind/double dummy fashion, so that patients in the DLX arm received IV throughout (IV placebo was given after the switch to oral in the DLX arm). The investigator recorded daily if the patient could be switched to oral. This allows for a comparison of the actual duration of IV therapy (3 days) compared to the physicians perception of patient readiness to switch, including daily calculation of the number and percent of patients in whom the investigator thought an oral switch was not feasible.

Results: 165 European patients were enrolled in the delafloxacin arm. Since all delafloxacin patients were switched to oral after day 3 (6 doses) in a blinded fashion, physicians were not aware which

patients switched. Physicians felt that some patients should remain on IV therapy throughout (see figure below). However, success rates at day 21-28 in the clinically evaluable population was 97.1% (133/137) in the IV-oral switch study, which was similar to outcomes in a previous IV only study (98.2% [55/56]) with a similar study design.



Conclusions: European physicians felt that approximately 25-30% of the patients in this trial should remain on IV antibiotics longer than the reality of 3 days. But the outcomes were comparable with the "IV to oral" and the "IV only" regimens. Many factors influence the decision to switch to oral. These data suggest that physicians underestimate the patient's ability to tolerate oral medications. One goal of antibiotic stewardship is to shorten duration of antibiotic therapy, including IV therapy, to avoid costs and complications. The reasons that physicians have to delay a switch to oral therapy should be further evaluated.