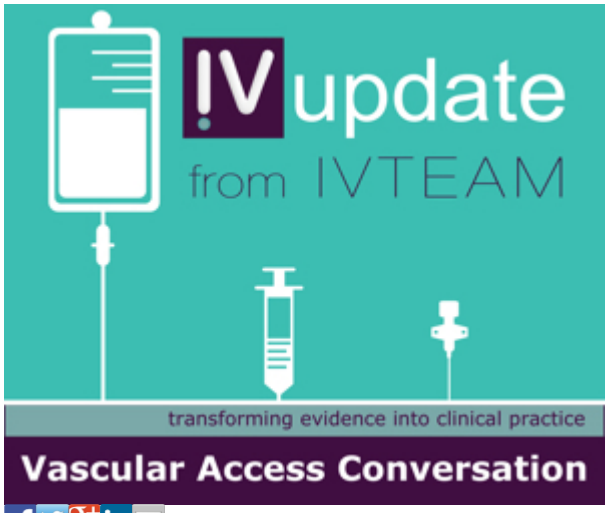

"Caspofungin PK in ICU patients showed limited intraindividual and moderate interindividual variability, and caspofungin was well tolerated." Muilwijk et al (2014)

Reference:

Muilwijk, E.W., Schouten, J.A., van Leeuwen, H.J., van Zanten, A.R.H., de Lange, D.W., Colbers, A., Verweij, P.E., Burger, D.M., Pickkers, P. and Brüggemann, R.J.M. (2014) Pharmacokinetics of caspofungin in ICU patients. Journal of Antimicrobial Chemotherapy. 69(12), p.3294-3299.

Pharmacokinetics of caspofungin in ICU patients http://ctt.ec/0Q66s+ @ivteam #ivteam

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Abstract:

Objectives: Caspofungin is used for treatment of invasive fungal infections. As the pharmacokinetics (PK) of antimicrobial agents in critically ill patients can be highly variable, we set out to explore caspofungin PK in ICU patients.

Methods: ICU patients receiving caspofungin were eligible. Patients received a loading dose of 70 mg followed by 50 mg daily (70 mg if body weight >80 kg); they were evaluable upon completion of the first PK curve at day 3. Additionally, daily trough samples were taken and a second PK curve was recorded at day 7. PK analysis was performed using a standard two-stage approach.

Results: Twenty-one patients were evaluable. Median (range) age and body weight were 71 (45–80) years and 75 (50–99) kg. PK sampling on day 3 (n = 21) resulted in the following median (IQR) parameters: AUC0–24 88.7 (72.2–97.5) mg·h/L; Cmin 2.15 (1.40–2.48) mg/L; Cmax 7.51 (6.05–8.17) mg/L; V 7.72 (6.12–9.01) L; and CL 0.57 (0.54–0.77) L/h. PK sampling on day 7 (n = 13) resulted in AUC0–24 107.2 (90.4–125.3) mg·h/L, Cmin 2.55 (1.82–3.08) mg/L, Cmax 8.65 (7.16–9.34) mg/L, V 7.03 (5.51–7.73) L and CL 0.54 (0.44–0.60) L/h. We did not identify any covariates significantly affecting caspofungin PK in ICU patients (e.g. body weight, albumin, liver function). Caspofungin was well tolerated and no unexpected side effects were observed.

Conclusions: Caspofungin PK in ICU patients showed limited intraindividual and moderate interindividual variability, and caspofungin was well tolerated. A standard two-stage approach did not reveal significant covariates. Our study showed similar caspofungin PK parameters in ICU patients compared with non-critically ill patients.

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