EDITORIAL

Therapeutic drug monitoring of flucloxacillin

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I favour therapeutic drug monitoring. It potentially decreases the risk of toxicity while increasing therapeutic effects of medication. Yet, therapeutic drug monitoring is not necessary for every prescribed drug. It is especially useful in drugs with a small therapeutic window, for example, lithium or antiepileptics, or when there is a strong relation between drug concentration and effect.

In the current issue of the journal, Dijkmans et al. elaborate on therapeutic drug monitoring in patients treated with flucloxacillin who are scheduled to switch from intravenous to oral administration. They state that orally administered flucloxacillin has variable absorption and by performing an oral absorption test (OAT), it is possible to identify patients with inadequate or decreased flucloxacillin absorption. In their paper, they describe two tests, one with and one without interruption of the intravenous administration. Both tests perform equally well, however the test in which the intravenous administration is not interrupted is much easier to conduct. In the study, just over 13% of patients showed, in the authors' opinion, an inadequate increase in serum level.[1]

There have been previous reports on therapeutic drug monitoring of beta-lactam antibiotics but most have focused on critically ill patients in an intensive care unit, demonstrating that in such situations drug monitoring can be useful to optimise antibiotic exposure and maximise effectiveness, thereby potentially improving outcome.[2-5] It is unclear whether this conclusion also holds true for the current study as the patient population is different and apparently less ill, knowing that they can switch route of administration. It would have been informative if we would have known the outcome of those who failed the test. Did they switch therapy? Was there an increase in flucloxacillin dose? Was their outcome worse? And what to do with patients with mild infection, who never need intravenous therapy? Need they be tested?

The authors plea that other institutions adopt their above-mentioned approach of OAT in the management of patients with severe *S. aureus* infections. It would be been more convincing if they had demonstrated that their approach also improves *outcome*.

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