

Abstract video-conference “Therapeutic drug monitoring of antiseizure medications: current status and perspectives”

Antiseizure medications (ASMs) are the mainstay of the treatment of epilepsy. There are currently 27 marketed ASMs, most of which are subject to therapeutic drug monitoring (TDM). The concept of TDM for ASMs has changed profoundly over the years, moving from the simple measurement of drug concentration in biological fluids and development of new analytical techniques in the early sixties to a fundamental role in the individualized management of therapy. The wide pharmacokinetic variability of ASMs results in extensive variability in serum drug concentrations among patients receiving the same dose. Moreover, serum ASM concentrations can vary over time within individuals due to drug interactions, physiological changes in drug clearance, the impact of comorbidities, and changes in adherence. TDM can be highly beneficial in guiding dose adjustments in these situations. TDM is particularly valuable in clinical settings associated with prominent inter- and intra-individual pharmacokinetic variability, such as pediatric age, pregnancy, the elderly and patients on polytherapy. The aim of this symposium is to provide an overview of current evidence on the rationale, indications and implementation of TDM of ASMs in clinical practice.