

THERAPEUTIC DRUG MONITORING USING SERUM CONCENTRATIONS IN PATIENTS WITH EPILEPSY RECEIVING VALPROIC ACID IN MONO- OR POLY THERAPY

E.I Brusturean-Bota¹, L.D Perju-Dumbrava¹, A.D Buzoianu^{1,3}, C.S Maier^{1,4},
L.C Perju-Dumbrava^{1,2}

¹*University of Medicine & Pharmacy "Iuliu Hatieganu", Cluj-Napoca, Romania*

²*Department of Neurology I, County Hospital, Cluj-Napoca, Romania*

³*Department of Clinical Pharmacology, Faculty of Medicine, Cluj-Napoca, Romania*

⁴*Department of Drug Analysis, Faculty of Pharmacy, Cluj-Napoca, Romania*

emabrusturean@yahoo.com

BACKGROUND: Measuring serum concentrations of antiepileptic drugs (AEDs) can have a valuable role in guiding patient management.

PATIENTS AND METHODS: 87 patients with epilepsy receiving Valproic acid (VPA) were randomly assigned to treatment with or without the support of therapeutic drug monitoring (TDM). Follow-up period was one year. Patients were divided for the start in two groups (A, B). Blood samples for drug concentrations were drawn from all patients at the beginning, at six and twelve months, but we were informed about the results only for the patients from group A. After 6 months, for this group we have established VPA doses to be taken into account clinical aspects and TDM. For group B, we establish the VPA doses only for clinical aspects.

RESULTS: A good response at AEDs had 30 patients (68, 2%) from group A, and 29 patients (67, 4%) from group B. 5 patients from group A were having, at the beginning of the study, the level of VPA concentrations out of the reference range. Three of them had high frequency of seizures/month. In group B, 7 patients (16, 3%) had VPA concentrations out of the reference rang. 38, 5% of them had high frequency of seizures. After six months check, in group A, seizures control was improved at all patients with high frequency and VPA concentrations out of the reference range.

CONCLUSION: TDM play a role in epilepsy management, partly due to the nature of the condition and partly because of the pharmacokinetic variability of AEDs.