



***The Management of ED Seizure and Status Epilepticus Patients:
The Role of 1st and 2nd Generation Anti-epileptic Drugs in 2007***

Second Generation AEDs: Characteristics, Guidelines and ED Patient Selection

Yevgenya Kaydanova, MD, PhD, FAAN

**Assistant Professor
Department of Neurology and Rehabilitation Medicine
Director, EEG Lab and Epilepsy Clinic
University of Illinois College of Medicine and Hospital, Chicago, IL**

Learning Objectives

- Discuss the current use of second-generation AEDs in long-term epilepsy patient management based on patient profiles and drug characteristics.
- Determine how emergency physicians can enhance their use of these therapies in their local Emergency Departments so as to enhance seizure and SE patient outcome.

Background

As emergency physicians have provided anti-epileptic drug (AED) therapy to ED patients who present with recurrent seizures or in status epilepticus, there have been a limited and consistent number of available AEDs to choose from. Now, for the first time, there is a second generation AED that is available for parenteral use in the ED. It is suggested that the second generation AEDs have a different safety, clinical effectiveness, and cost profile in the treatment of epilepsy patients, and many present to the Emergency Department following a seizure while on these newer AEDs.

In order for emergency physicians to be able to optimally treat seizure and SE patients, it must be understood how the second generation AEDs differ as a class from the first generation AEDs and how they differ between one another. Given that the second generation AEDs differ in their clinical indications, in their similarity with first generation AEDS, and with their loading and side effect profiles, it is important to know if these differences in any way should influence AED choice in the treatment of ED seizure and SE patients. This lecture will describe the second generation AEDs with respect to clinical effectiveness, safety, adverse event profiles, loading characteristics, and possible ED use.

Key Clinical Questions

- What are the second generation AEDs, and how do they differ from one another and the first generation AEDs with respect to clinical effectiveness, safety, and ease of use?
- What role do the long-term use second generation AEDs play in the use of these AEDs in the treatment of ED seizure and SE patients?