

Phenytoin

In writing his annual *Epilepsia* review of 1940, Lennox waxed lyrical on the topic of a newly discovered drug – phenytoin: *‘The big news of the year is the discovery and clinical use of sodium diphenyl hydantoinate (Dilantin Sodium). Merritt and Putnam, working at the Neurological Unit of the Boston City Hospital, report the results of treating 200 non-institutionalised cases of epilepsy. Of 118 patients who received treatment from 2 to 11 months, grand mal attacks had been absent in 58%, and in an additional 27% these were greatly reduced...results were relatively poor for petit mal...Benefit...was most dramatic in patients having psychomotor attacks. Besides being more effective than phenobarbital or bromides in controlling grand mal and psychomotor seizures, dilantin has the great advantage of having only a weak hypnotic effect.’* Thus was phenytoin announced to the world and within a very few years it became available (no licensing needed) worldwide.

Its introduction was of course a major step in the history of epilepsy, neurology and clinical pharmacology. It transformed the treatment of epilepsy, it changed the conceptual basis of epilepsy practice, the approach to drug discovery, the role of the pharmaceutical company in epilepsy, the organization of epilepsy care and indeed the whole international epilepsy movement. It is doubtful whether any other single treatment, with the possible exception of phenobarbital, has had such an enduring and worldwide impact on the medical or social aspects of the disease. It was the result of an enormous growth in organic chemistry in the previous 30 years. The chemical structure of drugs was well understood, as was the concept of manufacturing families of drugs which might have similar functions (e.g. the hydantoins and barbiturates). Phenytoin was not the first hydantoin to be synthesized which had known antiepileptic effects (phenylethylhydantoin {Nirvanol} was an important precursor but was not tested in any large clinical trial). It was the result of a programme of screening drugs using an experimental cat model of epilepsy by Merritt and Putnam, but neither the concept of drug-screening nor the use of electroshock was new. Nevertheless, the recognition of the potential of phenytoin and its rapid introduction into clinical practice were a triumph, and as Lennox put it, the year of the discovery of phenytoin was *‘a year of jubilee for epileptics.’*

in epilepsy prerequisite for emotional adjustment; therapy

prerequisite for therapy: THE PARKE-DAVIS FAMILY OF ANTICONVULSANTS

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