Antiepileptic Drugs

Editors H.-H. Frey and D. Janz

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Preface

Epileptic disorders need treatment for many years or even for life, and this makes a thorough understanding of the pharmacokinetics and possible hazards and side effects of the drugs used in treatment mandatory. During recent decades our knowledge in this field has considerably increased, not least as a result of the development of specific and sensitive methods for the determination of antiepileptic agents in biological material. The clinical pharmacology of this group of drugs has been studied extensively and can today be regarded as well established. This does not necessarily mean that drug treatment of epilepsy is without problems. For example, it has recently been shown that one of the newer antiepileptic drugs, greeted with great enthusiasm by clinicians, may in rare instances induce serious damage to the liver and the pancreas, and seems even to have a certain teratogenic potential.

Clinical problems should be understood as a challenge to the experimental pharmacologist, who should try to find explanations for the clinical hazards, and, if possible, show new ways in which better drugs might be developed. In recent years interest has focused on the importance of the inhibitory transmitter γ-aminobutyric acid (GABA) in the pathophysiology of epilepsy, and there have been a series of attempts to find useful antiepileptic drugs among substances interfering with GABA metabolism in the CNS. While the final success of these attempts cannot yet be judged, it seems worthwhile to assemble reports on the experimental pharmacology of the drugs presently in use in this volume in order to provide research workers interested in the field of antiepileptic drugs and in the treatment of the different forms of epilepsy with a comprehensive and critical review of our present knowledge. Beyond the general and individual pharmacology of antiepileptic drugs, this volume contains a fairly broad section dealing with the clinical pharmacology and practical use of these agents, an introductory section on epileptic diseases in man and animals, and a section concerned with the pathophysiological mechanisms active in these diseases. These mechanisms may provide important starting points for new approaches to the development of active and specific drugs. The editors hope that the structure of the volume will make it easy for the experimental pharmacologist and the clinician to find information which might not be obtained so simply and quickly from other sources.

A chapter on the electrophysiology of the epileptic nerve cell was planned but had to be omitted because it would have delayed publication considerably, and thus deprived the book of its topicality. The editors would like to use this opportunity to thank all contributing authors, especially for the patience with

which they respected special wishes from the publisher and the editors and tolerated the delay that is all but unavoidable when a book is written by about 30 scientists from all over the world. We must also thank Professor HERKEN of the editorial board and the publisher for their sympathetic cooperation. Last but not least we thank the secretaries to the editors, Mrs. ANNE-EVA BARZ and Mrs. ILSEBILL BROOKES, without whose capable assistance the task would have been unsurmountable.

HANS-HASSO FREY
DIETER JANZ

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