pharmaceutic and pharmacokinetic parameters associated with a drug. The process needs to be better understood to allow reasonable interpretation of the pharmacokinetic data obtained for drugs that are recycled. The data presented here reflect the simplest case; discontinuous recycling, which is associated with gall bladder storage and emptying, is even more complex (1).

(1) W. A. Colburn, *J. Pharmacokinet. Biopharm.*, in press.

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BOOKS

REVIEWS

Basic Clinical Pharmacokinetics. By MICHAEL E. WINTER, with BRIAN S. KATCHER and MARY ANNE KODA-KIMBLE. Applied Therapeutics, P.O. Box 31-747, San Francisco, CA 94131. 1980. 231 pp. 14.8 × 22.7 cm. Price $22.00.

Pharmacokinetics and biopharmaceutics are well-established disciplines. Their contributions in describing drug disposition, and predicting plasma drug concentrations and changes in drug concentrations are generally recognized. During the past decade, evaluation of drug concentrations in biological fluids has found wide acceptance as part of drug therapy monitoring. The authors view this book as a practical guideline for the clinician in evaluating drug monitoring.

The book is divided into two parts. The first part gives a brief overview of the basic principles of pharmacokinetics dealing with bioavailability, rate of administration, desired plasma concentration, volume of distribution, clearance, elimination, steady-state concentrations, interpretation of plasma drug concentrations, selection of appropriate equations, and creatinine clearance. At the end of the first part, a very instructive diagram is given for evaluation and interpretation of plasma levels. This diagram will be very helpful for any clinician confronted with blood level data interpretation.

Part 2 discusses the clinical pharmacokinetics of drugs usually monitored by a clinical pharmacokinetics service. The following drugs are covered: digoxin, lidocaine, procainamide, quinidine, theophylline, gentamicin, phenobarbital, and phenytoin. For each of these drugs, therapeutic and toxic plasma levels, bioavailability, if applicable, and the most important pharmacokinetic parameters (*i.e.*, volume of distribution, clearance, and elimination half-life) are covered. Where applicable, the influence of age, disease, and other concomitantly given drugs on drug disposition is discussed.

This section, which is well referenced, is followed by a selection of typical clinical cases, along with the pharmacokinetic approach for solution. The calculations are listed stepwise so that even one who is inexperienced in pharmacokinetics can easily follow. This section will be of great value to anyone interested in or practicing clinical pharmacokinetics, as well as for teaching undergraduate and graduate students. Although only a few drugs are discussed in detail, once one masters these problem cases, the principles can be applied and tailored to many more drugs.

The book contains three appendixes: I, nomograms for calculating body surface area of children and adults; II, a listing of equations used throughout the text; and III, a glossary of terms and abbreviations.

In summary, this is a well-written and well-designed text which incorporates the most important basic principles of basic and clinical pharmacokinetics. As such, the book will be of great value to all those involved in clinical pharmacokinetics and drug monitoring, particularly those who are entering the field. The authors have to be congratulated for writing such a well-organized guideline to the practical approach of drug level monitoring.

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GC/MS Assays for Abused Drugs in Body Fluid. NIDA Research Monograph 32. By RODGER L. FOLTZ, ALLISON F. FENTIMAN, and RUTH B. FOLTZ. National Institute on Drug Abuse, Division of Research, 5600 Fishers Lane, Rockville, MD 20857. 1980. 202 pp. 14 × 23 cm. Price $5.00. (Available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Specify GPO stock no. 017-024-01015-4.)

This monograph, prepared by authors who are well versed in the areas of analytical methodology and drug abuse, should be valuable to investigators interested in quantitating drugs in biological fluids. This work is actually a compilation of assays used for measuring the levels of drugs most often misused.

This volume (13 chapters) includes an introduction and a discussion of experimental considerations and operations common to all of the assays (Chapter 2), and each remaining chapter is devoted to a particular drug that is commonly abused. The inclusion of Chapter 2 (which deals with the basics of obtaining internal standards, preparing calibration curves, sample extractions, performance evaluation of the gas chromatograph–mass spectrometer, *etc.*) is an ideal approach since it greatly reduces excessive repetition that would have been required in each of the succeeding chapters. The authors recommend that investigators concentrate on Chapter 2 along with the specific chapter for the drug in question.

Each succeeding chapter is devoted to one of the following drugs of abuse: phencyclidine, methaqualone, methadone, Δ^9-tetrahydrocannabinol and two of its metabolites (11-hydroxy-Δ^9-THC and 11-nor-9-carboxy-Δ^9-THC), cocaine and its major metabolite (benzoylecgonine), morphine, diazepam and its major metabolite (*N*-desmethyldiazepam), amphetamine, methamphetamine, 2,5-dimethoxy-4-methylamphetamine, and mescaline. Each chapter begins with a brief historical description of the drug followed by a synopsis of its pharmacological effects. A discussion on pharmacokinetics and metabolism examines which biological fluid should be chosen for assay and whether metabolites should be quantitated. Then the sensitivity and selectivity of most of the techniques (*e.g.*, spectrometry, gas chromatography, and radioimmunoassay)