

Buchbesprechungen / Book Reviews

Antidotes

Robert J Flanagan and Alison L Jones with a section by Timothy C Marrs and Robert L Maynard. 1st Edition, 326 pp., 96 Figures (mainly structures), 57 Tables, Taylor & Francis, London, New York, 2001. Paperback, 45 GBP. ISBN 0-748-40965-3.

Hans H. Maurer, Homburg (Saar)

Adequate treatment of poisonings is an important task in emergency medicine. Fortunately, the progress of modern emergency medicine nowadays allows to reduce the fatalities. In times past, much effort was directed to fashioning antidotes and especially, to obtaining one that was 'universal' in its actions. Today, only a few antidotes are still in clinical use and there are only very few handbooks devoted to such drugs. The aim of this book is to provide up-to-date information on the development and clinical use of antidotes, their proposed mechanism of action, toxicity and availability as well as practical aspects of their clinical use. The antidotes discussed are primarily those, which are currently in use, under consideration or under development. Some other compounds of mainly historical interest are also mentioned where appropriate. The references have been verified from original sources as far as possible, even back to 1585, showing the historical relevance of antidotes.

The authors, Robert J Flanagan, Consultant Biochemist, and Alison L Jones, Consultant Physician and Consultant Clinical Toxicologist, both at Guy's and St Thomas' Hospital Trust, London, can be congratulated for this interesting work describing both, the biochemical/pharmacological/toxicological background and the clinical background of poisonings and their treatment by antidotes. The pros and cons of the particular antidotes are reviewed, including various problems in supply and usage. An ideal antidote would be selective in action, efficacious, non-toxic, easy to administer by lay personnel using a minimum of special apparatus, cheap, and have a long shelf-life.

The book contains information on the antidotal treatment of poisoning, with substances encountered not only in Western Europe/North America/Australasia, but also in developing countries. Doses and routes of administration are covered as well as instances where antidote administration complicates or compromises toxicological analyses. The reader is referred to standard toxicological texts for detailed information on the diagnosis and management of poisoning. In detail, the following topics are discussed.

The book starts with an informative general introduction including a well written and interesting chapter on the history of antidote development e.g. of the so-called 'Antidotum Universale' Theriac, the production of which in the medieval Strasbourg is depicted on the book cover. Following chapters cover agents used to treat poisoning with toxic metals and organometallic compounds, immunotherapy, metabolic antidotes, pharmacological antidotes, antidotes to carbon monoxide, cyanide and hydrogen sulphide, antidotes to chemical warfare agents (this actual chapter was written by Timothy C Marrs from the Food Standards Agency and Robert L Maynard from the Department of Health, London), antidotal treatment of paraquat poisoning, and finally interference of antidotes with toxicological analyses.

The most important information is summarised 'at a glance' in four appendices. Appendix 1 lists the poisons and the corresponding antidotes with the suggested route of administration. Appendix 2 summarises the dosage and dosage forms of some commonly used antidotes. Appendix 3 contains the flowcharts to aid treatment of paracetamol (acetaminophen) poisoning published in 2002 by the working group of Alison Jones in *Emerg Med J*. Finally, appendix 4 lists 'therapeutic/normal' and 'toxic' plasma concentrations of metals and trace elements

as well as their relative atomic masses and calculation factors for conversion of mass/volume to molar concentrations. The information of this last appendix is necessary for interpretation of analytical results.

Although at the first glance some antidotes seemed to be missing, the reviewer was able to find all of them after consulting the Index. Therefore, all in all, this book can be recommended to all research workers, staff of poisons information centres, drug information pharmacists, clinical toxicologists and veterinary surgeons and, last but not least, to analytical toxicologist working in clinical and forensic toxicology as well as in laboratory medicine. It should also be of interest to medical students, trainee pharmacists, emergency physicians and anaesthetists.

I wish this work regular updates and in this sense: Ad multos annos!

Wichtiger Literaturhinweis

M. Schulz, A. Schmoldt:

Therapeutic and toxic blood concentrations of more than 800 drugs and other xenobiotics

Pharmazie 58, 447-474 (2003)

Die bekannte und zum Standard-Arbeitsmittel toxikologischer Labors gehörige Liste therapeutischer (bzw. normaler), toxischer und komatös-letaler Blutkonzentrationen und Halbwertszeiten wurde von den Autoren nun von 500 auf mehr als 800 Wirkstoffe erweitert. Die Aufstellung enthält Hypnotika, Benzodiazepine, Neuroleptika, Antidepressiva, Sedativa, Analgetika, Entzündungshemmer, Antihistaminika, β -Blocker, Antibiotika, Diuretika, Calciumantagonisten, Herzglycoside, Antiarrhythmika, Antiasthmatica, ACE-Inhibitoren, Opioide, Localanästhetika und viele andere Medikamente mehr. Außerdem wurden toxikologisch relevante Xenobiotika einbezogen. Die Daten wurden aus früheren Sammlungen oder aus Primärquellen entnommen und durch eigene Ergebnisse der Autoren ergänzt. Die Halbwertszeiten repräsentieren wenn immer möglich den terminalen halblogarithmischen Konzentrationsabfall.

Sonderdruckanfragen können gesendet werden an:

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