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Book review

The Laboratory Practice of Clinical Toxicology, by E. Berman Charles; C. Thomas Publ., Springfield, 1996, XIV+206 pp., price US\$ 53.95 (hard bound), ISBN 0-398-06581-0

Today, clinical laboratories become more and more engaged in performing toxicological analyses as they are confronted with various aspects of drug abuse, with therapeutic drug monitoring and to a lesser extent with the analysis of trace metals and other toxins. This book claims to be an effort to introduce neophyte laboratorians into this practice of clinical toxicology.

Chapters I and II treat the general appearance of different matrices and what can be concluded from this as well as the general strategies to separate the different groups of compounds eventually present in these specimens. Chapters III through VI handle the different techniques applied in toxicological analysis, such as color tests, spectrophotometry, chromatography including paper-, thin layer-, gas- and liquid chromatography and immunoassay. The author especially emphasizes on important issues such as interferences and pitfalls of the latter technique.

The same holds for the chapter on therapeutic drug monitoring (TDM) where essential data are incorporated about drugs that require TDM. The chapter on trace metals, clearly the area of interest of the author, extensively discusses on the way of exposure, on the toxic effects of not less than 17 trace elements. The last chapter deals with the symptoms and the analysis of miscellaneous poisons often encountered in the area of clinical toxicology, such as carbon monoxide,

cyanide, hydrogen sulfide, methemoglobin, phenol and phosphorous. An extensive reference list is then followed by a useful index.

The book contains useful information for the interested reader clearly based on the experience of the author acquired during a long period of hospital laboratory practice.

The major point of criticism, however, concerns the fact that the whole work is based on rather old literature data (references mainly originate from the seventies and the eighties). In addition, newer techniques – such as diode array detection and mass spectrometric detection – are not treated and the quality of a number of figures is absolutely below what is expected. Originating from the author's background, too much attention has been paid to the chapter on trace metals. This clearly does not reflect the real situation in a clinical toxicological laboratory where screening tests together with confirmation by chromatographic spectrometric techniques are more prevalent.

Due to the above mentioned weaknesses the book has mainly a historical value except for two scientifically interesting chapters (i.e. on immuno-assays and on trace elements). The readers should be aware that during the last decade, other techniques – such as high-performance liquid chromatography with photodiode array detection (HPLC-DAD) and gas chromatography with mass spectrometric detection (GC-MS) – became established techniques also in a clinical toxicological laboratory.

Ghent, Belgium

Willy E. Lambert