The specific treatment of virus diseases


There are few, if any, other books devoted entirely to the use of antiviral drugs in clinical disease. Whoever compiles such a volume is in trouble, for he is likely to be either a laboratory worker or a clinician and although the expertise of both should overlap, there is likely to be bias in one or other direction. A similar problem confronts a reviewer attempting to judge the book fairly.

There is a useful general introduction on classification and replication of viruses, and a somewhat more detailed description of the viruses that cause illnesses now amenable to specific treatment, i.e., the herpesviruses, poxviruses and orthomyxoviruses. The author speculates about the course of virus infections, and about latency and cell transformation. There is a very good chapter on the principles of viral chemotherapy in which the author stresses the importance of recognising the practical difficulties of starting treatment of acute viral infections early enough, before they have already run their natural course. The reviewer is a little surprised at the suggestion that eyedrops of idoxuridine and trifluorothymidine be used prophylactically to prevent recurrences of herpes simplex keratitis. Useful though idoxuridine is in the treatment of herpetic eye disease, sensitisation is a major drawback to its long-term use for prophylactic purposes. In the paragraph comparing antiviral agents with vaccines and antisera, it is probably the overstatement of the year to say that vaccines have brought about the virtual eradication of poliomyelitis, yellow fever and smallpox. Those of us who have occasion to work in certain parts of tropical East Africa would find it hard to agree with this statement. When discussing resistance, the author states that resistance of herpesvirus to idoxuridine in eye infections (which not everyone has been able to confirm) is not a problem in treatment, as resistant strains are sensitive to trifluorothymidine and cytarabine. Unfortunately, trifluorothymidine is not yet available for clinical use and is extremely expensive, and cytarabine can cause corneal stippling. The more commonly used chemotherapeutic drugs are then described, including cytarabine, vidarabine, amantadine hydrochloride and methisazone; this is followed by chapters on the treatment of individual infections, with very brief clinical descriptions. The recurring error of ascribing the first description of eczema herpeticum to Kaposi (Kaposi's varicelliform eruption) is made; it was, in fact, first described by Juliusberg in 1898 (Archiv für Dermatologie und Syphilis, 45, 21). It would be far better if the eponyms were dropped and the terms eczema herpeticum and eczema vaccinatum, as the case may be, were always used.

In the introduction to the chapter on herpes simplex it is stated that "Herpes simplex is a skin disease and only one particular manifestation of infection with the virus, and it is therefore illogical to refer to herpes simplex in connexion with other manifestations of infection with the same virus, such as encephalitis and keratitis". This is not correct, and it is perfectly proper to use the terms herpes simplex encephalitis, herpes simplex virus hepatitis, etc. On p. 104 there is an obvious misprint, where follicular keratitis ought to read follicular conjunctivitis. A much more serious error is the suggestion that "The administration of idoxuridine has since become standard practice in the treatment of herpetic encephalitis". The systemic administration of the toxic doses of idoxuridine needed to affect the virus infection should today be considered malpractice. The 1975 report from the Boston Interhospital Study Group can leave no doubt about this. The use of cytarabine is also discussed but here, too, there are many imponderables, and it is becoming clear that the general management of the patient, particularly with regard to dehydration of the brain and general dehydration of the patient, is far more important than the possible contribution made by the antiviral drug.

The clinical account of varicella-zoster virus infections in chapter 6 is very sketchy, but probably justifiably so. The problems of chickenpox are to be seen, not in the everyday case, but in the unusual cases that can mimic smallpox. It is not true that treatment with the currently available agents is never justified in chickenpox except in patients with underlying congenital defects of immunity or in those who are immuno-suppressed. Chickenpox in the previously healthy adult can be very severe and, especially when complicated by pneumonitis,
may require specific treatment; in the reviewer's experience vidarabine is the drug of choice. The author then considers the use of cytarabine for ordinary segmental zoster. However, this must take second place to topical idoxuridine. Since the book was written, Dr Gary Simpson, in a double-blind controlled trial, carried out in Oxford, compared topical idoxuridine-indimethyl sulphoxide with cytarabine and showed that the side effects of cytarabine treatment were so unpleasant in the majority of patients as to make it probably unacceptable.

In the chapter on poxviruses, an extensive account is given of methisazone but there is no mention of idoxuridine or cytarabine, both of which are useful and effective in the treatment of vaccinia. Cytarabine saved the tour of the All Blacks in England on one occasion when a substitute player who had not previously been vaccinated developed eczema vaccinatum; treatment cleared his lesions within 3 days. The final chapter deals with myxoviruses and papovaviruses, and it would perhaps have been worth mentioning that there are reports in the literature of at least half a dozen cases of papillomata of the larynx in children that have been treated with systemic vidarabine; in at least two of them there has been no recurrence over an observation period of almost 4 years.

These are relatively minor criticisms. This book will prove extremely useful as a work of reference and not least valuable because of the excellent bibliography and relevant references. Dr Bauer is to be congratulated on having produced a volume that many engaged in the field will find of great help.

B. E. JUEL-JENSEN

Antifungal compounds. Volume 1. Discovery, development and uses

A single chapter on fungicides in medicine, with 11 of its 24 pages devoted to an elementary account of the mycoses, is scant justification for the purchase of this book by medical microbiologists. However, although the control of plant pathogenic fungi, the theory and practice of applying foliar sprays and the use of fungicides in wood preservation and in industry are of little relevance to medical microbiology, the volume is a useful reference source on fungicide science and ought to be available in the specialised reference libraries.

The "History of fungicides" by E. Y. Spencer and "Detecting potential protective and systemic antifungal compounds" by E. N. Pelletier make particularly interesting reading. The observation that captan may be a potent carcinogen is noteworthy, as it was once used as a topical application for superficial fungal infection in man. However, the comments that the discovery of fungicides is largely empirical and that neat relationships between structure and activity are recognised only after the activity of the compounds is discovered are surely truisms, applicable to the development of most antimicrobial compounds.

The title "Fungicides in medicine" for the chapter by Smith Shadomy, H. Jean Shadomy and G. E. Wagner is somewhat misleading, as such commonly used drugs as griseofulvin and 5-fluorocytosine are usually accepted as being fungistatic. In under 11 pages, the authors review the antifungal antibiotics amphotericin B, nystatin, primaricin and griseofulvin, and discuss concisely the newer synthetic compounds, namely, 5-fluorocytosine, the imidazole derivatives, halprogin and tolnaftate. As primaricin is not listed in the US Pharmacopeia, it is assumed that the drug referred to is pimaricin, which has the equally acceptable name natamycin. The uses of potassium iodide, stilbamidine, hamycin, candidicidin, saramycetin and selenium sulphide are given, and the chapter concludes with useful comments on testing antifungal drugs in the laboratory.

It is stated that treatment failures with griseofulvin are rare, and usually occur only in nail infections and infections of the soles of the feet. In fact, treatment of Trichophyton rubrum infections of the toe nails is rarely successful, relapse frequently following cessation of therapy. From a medical viewpoint, the main criticism of this chapter is that the space given to an elementary account of the mycoses could have been more profitably used for additional information on the drugs.

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