AIDS in the Nervous System


This is a book written by a clinician and a neuropathologist aimed at helping "physicians to diagnose and manage the neurologic complications of AIDS and HIV infection". In addition, the authors wish to help those physicians to "understand the basic mechanisms underlying and associated with AIDS". After fair and informative introductory chapters dealing with basic aspects of immunodeficiency and the nervous system, the human immunodeficiency viruses and with epidemiology, there are chapters on neurological involvement, opportunistic infections, tumours, neurological disease in infants and children and treatment and prevention. About 13 individual case histories are presented throughout the book but its substance is a short review of published data rather than an account of the experience of the authors. Perhaps as a consequence the picture drawn does not always seem balanced and the recommendations made, allegedly those where there is "consensus" within the scientific community, often fall short of this objective.

In many areas the statements made are either contentious or do not give a balanced appraisal of the clinical problems posed by AIDS. A number of examples follow. Whilst it is true that "controlling opportunistic infections outside the CNS has not improved the outlook" of those with CNS disease (page 14) it should have been clearly stated also that controlling CNS opportunistic infection does not improve the final outlook either. The statement (page 10) that without rapid and effective diagnosis and treatment patients with AIDS and nervous system disease invariably die is not false, but it is also true that even with such diagnosis and treatment they invariably die. It is not clear that HIV causes a myelitis (page 37) nor is it true that toxoplasma reinitis is a common problem "associated with multiple neurological problems" (page 37). It is not generally accepted in the UK that patients with AIDS encephalopathy will require a brain biopsy to establish that the brain injury is not from an opportunistic infection (page 40).

The review on management of cerebral toxoplasmosis attempts to present different opinions but the end result is rather confusing. The statement that "many physicians believe it would be wisest to biopsy any brain mass evident in an AIDS patient before initiating treatment" (page 72) seems to be accepted by the authors since this policy appears in the flow diagram in the section on treatment (page 127). It is true that a therapeutic trial of suspected cerebral toxoplasmosis is reasonable if ring enhancing lesions on CT scan or MRI are not surgically accessible or is further justified if there is a 1.5 fold rise, or more, in toxoplasma IgG titre (page 72). However, the implication of this advice as well as of the view that medical treatment is to be preferred in patients who have "already been biopsied for other brain lesions" to avoid "repeated neurosurgical procedures" seem to be that a cerebral biopsy is otherwise indicated in suspected cerebral toxoplasmosis. Few would now agree with such policy in the UK. There is a relatively long discussion on toxoplasma antibody titres, which are of little use clinically, compared with the space allocated to CT scanning (page 69).

There are many points that should surprise the informed reader. There is a graph (page 91) on the expected recovery rate in progressive multifocal leucoencephalopathy if antiviral treatment is given—no data are known to be effective in this condition. It is not true that common pathogens for meningitis in AIDS patients include E Coli and Treponema pallidum (page 93). The section on peripheral neuropathies seems too short and uncritical. The evidence that there are "many cases of neuropathy caused by HIV itself" (page 53) is, at present, poor. It is not clear either how a rapid and thorough investigation may improve the long term outcome in AIDS (page 123).

The cases described are not always wisely chosen or representative. Seven female and six male cases are presented, a proportion far from the notorious current predominance of AIDS in homosexual males in western countries. In eight of the cases there was drug abuse, whilst homosexuality was the risk factor in one and blood transfusion in four. Two are children. The case history presented as an example of subacute encephalitis (page 39) is that of a woman who had biopsy proven non A non B chronic active hepatitis with a two week history and a clinical and laboratory picture indistinguishable from hepatic coma, some atrophy on CT scan and some focal white matter changes on MRI. She had changes of HIV encephalopathy and cerebral toxoplasmosis on a biopsy of the right temporal lobe but died shortly afterwards with a left hemiparesis and pneumomastia. The relationship of these histologic changes to the clinical presentation is far from evident.

The text is attractively presented and beautifully illustrated. It is unfortunate that the illustration chosen for the front cover