and, as an introduction, there is much in it which is praiseworthy.

MICHAEL SWASH

Management of Head Injuries. By Bryan Jennett and Graham Teasdale. (Pp 351; \$45.00, £22.50.) Philadelphia: FA Davis Co, 1981.

Relevance is important: a good deal is made of its place in medical education and research by those as far apart as pre-clinical students and officials of the DHSS, and academics are frequently lectured on the subject. This is a highly relevant book and it comes from the pre-eminent Glasgow school of neurosurgery. The only trouble about relevance is that it is by definition impermanent, and times have been changing fast lately. "This book" say the authors, "can reflect only thinking at the dawn of the 80s"; it is, indeed, the latest in a *contemporary* neurology series. It is hard to accept that such a good book must inevitably prove ephemeral, but scrutiny of the references supports such a conclusion. Of the 666* references, 72% are to publications of the past 10 years and only some 3% to those of more than 30 years ago. (Was really so little worthwhile work done in those days? Or are we seeing, even in this book, the tendency to be content with too many sources which are secondary, or even further removed from the primary? Reference 12 on p 276 is one example.) About 17% are the work of the Glasgow school itself.

This, then, is the present state of the art, and one could hardly ask for a more comprehensive account of such a complex subject. But the book's title is perhaps misleading; for it is the *basis* for management which is so well and fully explained. An unsolved practical problem is the serious gap which exists between the mass of those who find themselves having to manage head injuries and the few who acquire the knowledge which enables neurosurgeons to attempt to set standards which the others know to be mostly unattainable under the existing conditions of their work places.

Moreover, few of those who toil in the accident-and-emergency or accident-and-orthopaedic departments of district general hospitals will have had the time, opportunity or encouragement to undergo any serious training in the practicalities of head-injury care. There is no requirement for such training in the higher-training programme for orthopaedic

surgeons; and so varied are the special subjects listed as being necessary for an accident-and-emergency senior registrar's training that it is doubtful whether many will achieve competence in any but a few; and the difficult subject of head-injury care is unlikely to be one of them, for it is not even mentioned. Many of these trainees would I think find this book, very well written though it is, hard going and would not always easily discover—among the figures, the mass of reasoned argument, the pros and cons and the choices between inadequately proved procedures—clear guidance as to their best course of action under circumstances with which they are faced. Important principles too tend to be obscured by the evidence for them. Most of the information needed is in fact in the book, but the meat may be hard to find, and a work of this importance deserves a much more comprehensive index. [Fortunately, however, those who seek more didactic guidance will find still in print a short guide devoted exclusively to the practical aspects of management and unencumbered by statistics, references, or other evidence or authority for the advice which it offers. That slim volume has at least the merit of a recently published recommendation from the senior author of the book now under review.]

The deficiencies of the index have been mentioned, and a few examples should be given. I should have liked to be able to discover quickly what the book had to say under "children", and about "fat embolism" (it is hidden away on p 220 in the section of peripheral respiratory dysfunction). And where is "concussion"? At first, I thought it had been formally abolished, but it won't of course lie down; it still appears ghost-like here and there in the text. The great Trotter did at least attempt to define it more than 50 years ago—and not at all badly, if judged by the knowledge of his day. But what is "commotio" doing in the index? Is this again in English-speaking use, or have I missed a new EEC directive? The authors must forgive these modest swipes; too much space would be needed to list other omissions from the index and some relatively minor errors, or to argue several much rehearsed differences of opinion at present irreconcilable through lack of adequate evidence.

Doctors and research workers in this particular discipline, as in others, can at a certain stage do no more than point the way to the effective application of their

knowledge. Radical changes in the organisation of facilities for the care of the injured require similar changes in attitude within the medical profession, agreement on priorities for hospital staffing and—always the rub—finance. As the authors say, "the statistics fortify intracranial haematoma probably provide the best audit of the level of provision of health care for head injuries in a community", and it will be no fault of theirs if this book does nothing to lower the mortality from "the thief in the night". The stage at which apparently medical problems become political ones is too slowly appreciated or accepted by practical doctors. The problems of alcohol, seat-belts, and other aspects of road safety provide outstanding examples in the context of this admirable book, which will be read by those specialists whose contribution to the head-injury problem are so well brought together and correlated in only 351 pages—excluding the index.

JOHN POTTER

*It is of course today an irrelevance to note that 666 is the mystical Number of the Beast in *Revelation* 13, 18; but if the Editor will permit a namesake's digression, these remarkable coincidences can illustrate the changing nature of scientific relevance over three centuries. In 1642, Francis Potter, BD, an early experimental scientist and later FRS, published "An Interpretation of the Number 666" in which a combination of mathematical and anti-papal gymnastics pleased Pepys (also FRS) "mightily", while the biblical scholar, Mede, described it as "a wonderful discovery" calculated "to make some of your German speculatives half wild". The talented Potter's place in the discovery of blood transfusion may have been even more wonderful—for a re-assessment, see C. Webster (1971) *Medical History*, 15, 387. The significance of this latest appearance of 666 is not clear.

Myelin: Chemistry and Biology. Vol 49 of Progress in Clinical and Biological Research. Edited by George A Hashim. (Pp 130; \$18.00.) New York: Alan R Liss, 1981.

This small volume incorporates five reviews presented at a meeting of the American Society for Neurochemistry in Houston in March 1980. Braun, Pereyra and Greenfield suggest a model of the molecular organisation of CNS myelin in which basic protein forms a dimer bridging the major dense line. They also describe preliminary data on the sub-

cellular sites of synthesis of myelin proteins. Paterson emphasises the similarity between immune events in experimental allergic encephalomyelitis and multiple sclerosis. He refers to unpublished evidence that fragments of myelin basic protein are normally present in the blood, disappear during the development of EAE and return in higher concentrations during recovery. His interesting speculation is that these fragments and antibodies directed against them may be important in modulating the immune responses against myelin basic protein. Eylar, Ishaque and Szymanska confirm that another myelin basic protein, P2, is the neuritogenic antigen which produces experimental allergic neuritis. P2 is a highly ordered protein whose neuritogenicity depends on its conformation: Eylar's preparation of rabbit P2 has a low neuritogenicity which can be restored by the addition of phosphatidylserine. In contradiction to the finding of another group P2 was demonstrated immunocytochemically in all, rather than a proportion of peripheral nerve myelin sheaths: some staining is also present in the rabbit spinal cord. Quarles describes the myelin glycoproteins: P0 is the major structural glycoprotein of peripheral nerve myelin. Its carbohydrate moiety is located in the intraperiod line (apposed external surfaces of the Schwann cell) but the P0 molecule also protrudes into the major dense line. Myelin-associated glycoprotein (MAG) is present in both the peripheral and central nervous system myelin, although there is less in the peripheral nerves. It is present in the cytoplasm of oligodendrocytes and Schwann cells but absent from compacted myelin. It is of considerable interest because the area of loss of MAG extends further into the white matter surrounding a multiple sclerosis plaque than the loss of myelin and myelin basic protein demonstrated by Luxol Fast Blue or antimyelin basic protein serum. MAG may have an important role in the interaction between the myelin producing cell and the axon. Hashim, the editor, briefly summarises a generation of work on the encephalitogenic determinants of myelin basic protein in different species. He then describes a series of unpublished experiments demonstrating that a synthetic peptide S42 will prevent and suppress EAE. This effect can be adoptively transferred to other animals with lymph node cells. Peptide S42 is postulated to mimic a portion of the myelin basic protein molecule which

induces suppressor T cells and is separate from the encephalitogenic determinant. Confirmation of this and the link between EAE and MS would raise interesting new possibilities for the treatment of multiple sclerosis. The conciseness of this volume and its low price (\$18) make up for the cheap typescript format and frequent typographical errors.

Such a book is not the best forum for original data but as an anthology of five personal reviews by respected workers it is an excellent buy for the libraries of neurobiologists.

RAC HUGHES

British National Formulary. (Pp 400; £3.80.) London: British Medical Association and The Pharmaceutical Society of Great Britain, 1981.

This should be one of the most important books in medicine for 1981. Since the second World War neurology has changed from a diagnostic to a therapeutic speciality. How do we deal with the explosion of factual pharmacology in treating our patients?

The main advantages of the previous BNF were its introductory sections on systemic pharmacology, with selective prescribing lists, convenient size and hard back format. This 1981 total revision has lost these advantages. It is an inch too big to fit most pockets, not very durable and contains complete rather than selective lists of available drugs, often in extremely small type. There are however many gains, not least in immediate access to a great deal of information about most of the products available in the United Kingdom. The association rather than separation of prescribers notes and lists of available drugs should help sensible and informed prescribing. The drug-lists can be overwhelming, however, as with the 25 different rubifacients described, 26 oral contraceptives, 31 compound antacids, 52 compound analgesics, and no less than 92 expectorant and cough medicines. All this duplicates MIMS, although without the advantage of giving exact drug costs. The text often repeats the same cautions, contra-indications and side effects with related drugs and gives little real advice on which of many similar drugs to select.

The value of the new BNF must, therefore, lie in the prescribers notes. How good are these? Unfortunately, there are many weaknesses in the central nervous system section and little or no use is made

of tables. The many different benzodiazepines are as numerous as previous generations of barbiturates, although they may be safer in clinical practice. Little guidance is given in individual drug selection. The anti-psychotic and anti-depressant drug sections are both good, although it is incorrect to say that tardive dyskinesia is usually irreversible on drug withdrawal, or that there are significant sex differences in the response to sedative tricyclics. Anti-emetics are recommended only when the cause of vomiting is known, probably a largely unattainable ideal. New drugs are courageously advocated although this may be sometimes premature, as with isometheptene which is said to be as effective but with less side effects than ergotamine in the treatment of migraine, without stressing the combination of isometheptene with paracetamol in one preparation and the possibility of paracetamol poisoning. The antiparkinsonian section is most curious. All the available anticholinergics are described as having similar actions, without noting their different sedative or stimulant effects. The use of anticholinergics is specially recommended in treating patients with postencephalitic Parkinsonism who are also taking anti-psychotic drugs, a combination I have never encountered. Amantadine is said, incorrectly, to benefit only a small proportion of patients. The described side effects of levodopa are ludicrous, and include abdominal pain, polyuria, incontinence and difficulty with micturition. A so-called slow release preparation of levodopa is described without comment that this ensures maximum gut decarboxylation and minimum brain dopamine availability.

Most students, house officers and registrars will find the new BNF a very convenient source of drug information. Neurologists and psychiatrists may have doubts about the coverage of their own speciality, but as a quick reference to the very many drugs available and their mode of action, the new BNF is far superior to both the old edition and to MIMS, and its constant use should improve our prescribing habits. It is not intended to be a substitute for more comprehensive books such as the excellent recent *Neurological Clinical Pharmacology* by Eady and Tyrer (MTP, 1980).

JD PARKES