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Epileptic attack, delirium, and periodic complexes in the EEG during mianserin treatment

Tricyclic and newer antidepressants have certain undesirable effects, including an increased susceptibility to delirium, myoclonic jerks, and epileptic convulsions.¹ Two patients had an epileptic attack during mianserin treatment followed by delirium and EEG changes presenting as slow activity with periodic complexes similar to those seen in the Creutzfeldt-Jakob disease.

A 61 year old male had suffered from paranoid schizophrenia since 1955. The patient was admitted to hospital due to increased psychotic symptoms in August 1987. On admission, medication previously used (promazine 200 mg and mianserin 60 mg in the evening) were continued and chlorpromazine 100 mg, three times a day, was introduced. He developed acute left-sided hemiplegia five days after admission. CT of the head showed central atrophy and a new right parietal infarction. Five days after the stroke the temporarily discontinued neuroleptic and antidepressant medications were reintroduced due to nocturnal delirium and a continuation of psychotic symptoms during the daytime. Two weeks later he had numerous grand mal attacks associated with periodic slow complexes similar to that seen in Creutzfeldt-Jakob disease (CJD) on EEG. Both symptoms subsided after the introduction of carbamazepine and discontinuation of mianserin. The patient recovered from the hemiplegia and delirium, and during a follow up period of 18 months, no progressive cognitive deterioration or new epileptic attacks were observed.

A 68 year old female with mild depressive symptoms treated with a low doxepine dose (35 mg/day) developed a major depressive episode during the summer of 1989 and was admitted to a psychiatric hospital. At admission she was extremely depressed (Hamilton depression rating scale score 31), but showed no cognitive deterioration in the Mini-Mental State Examination (MMSE score 24), and her EEG was normal. Doxepine treatment was discontinued and mianserin was introduced stepwise, reaching 90 mg on the evening, resulting in a therapeutic mianserin concentration of 359 nanomoles/litre (therapeutic level 200-450 nanomoles/litre).

Two weeks after admission she had an epileptic attack, after which she showed cognitive impairment (MMSE score 8), had myoclonic jerks, and met the DSM-III-R criteria for delirium during the next six days. Mianserin treatment was discontinued. Since her second EEG showed generalised slowing with periodic complexes similar to those seen

in CJD, she was transferred to the Department of Neurology, where laboratory results including CSF and CT of the head were normal. After the delirious episode EEG was normal, cognitive functioning restored (MMSE 25), and the myoclonic jerks disappeared. During a follow up period of six months, continuing depressive symptoms (Hamilton score 27) were observed as well as an absence of epileptic attacks, cognitive deterioration, and myoclonus.

Creutzfeldt-Jakob disease often runs a rapid course and is usually accompanied by a number of neurological symptoms and signs besides dementia. Initial depressive symptoms, epileptic fits and delirium also occur.² The pathogenesis of the EEG abnormalities seen in CJD is unknown,³ but the normalisation of EEG after delirium and the stable clinical picture in our patients during follow up is not consistent with CJD. EEG changes in delirium in the form of increased slow wave activity and disruption of the normal alpha rhythm has also been demonstrated.⁴ A noxious response to mianserin in our patients is suggested despite the therapeutic plasma level in the second case.

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BOOK REVIEWS

Clinical Magnetic Resonance Imaging. Edited by RR EDELMAN AND JR HESSELINK. (Pp 1192 Illustrated; Price £118.00.) Sidcup, Harcourt Brace Jovanovich Ltd. 1990. ISBN 0-7216-2241-0

This multi-author text, with 68 contributors, covers the entire spectrum of clinical MRI. Like many other radiological texts it is really too large and heavy. Our copy is already showing signs of fatigue. It might have been preferable to publish the first 12 chapters as a separate volume.

The initial sections cover the physical basis and technical aspects of magnetic resonance. These are based on the excellent monthly course organised by John Hesselink and Robert Mattay at the M.R. Institute in San Diego. They are readable, extremely well illustrated and above all, understandable. Included is a chapter on clinical spectroscopy, which might better have been called "Spectroscopy for the Uninitiated" and

which left us with a better understanding of its potential future clinical role.

Images in the brain and spine sections are excellent. Some illustrations in the body section are rather disappointing and are not "state of the art". This is a problem with all MR texts. They are always out of date before publication. The editors have recognised this and include future development sections in many chapters. The musculo-skeletal chapters are superbly illustrated and written.

In some areas the clinical emphasis will seem strange to a British readership. For example, two pages are devoted to spinal cord tumours, 27 to examination of the testes and a similar number to temporomandibular joint dysfunction.

As a neuro-MR reference work this adds little to the much smaller "MRI of the CNS" by M. Brant-Zawadzki and D. Norman. The chapter on normal neuro-anatomy cannot compare with "Cranial and Spinal MRI" by Daniels, Haughton and Naidich. The compact "Clinical MRI" by V. M. Runge is similar in scope. Nevertheless, this authoritative general reference work on clinical MRI is excellent value at £118.

RJV BARTLETT
AA NICHOLSON

Neurobiology of Higher Cognitive Function. Edited by AB SCHEIBEL AND AF WECHSLER. (Pp 370; Price \$65.00/£39.95.) Hove, Lawrence Erlbaum Assoc Ltd. 1990. ISBN 0-89862-425-8

This book is the proceedings of one of the meetings to be held regularly in the UCLA Forum in Medical Sciences. The subject of the meeting and title of the book reflect increasing interest in the morphological and physiological substrates of higher cognitive functions. The availability of modern imaging techniques, including MRI, SPECT and PET together with more precise quantitative morphological measurements, neuropsychological assessments and molecular biology have considerably contributed to the understanding of the relationship between cerebral structures and higher cognitive function. The application of these new methods to the brain has yielded rich dividends in an area of biomedical research which hitherto escaped scientific scrutiny.

This book gives a good, if not comprehensive, account of recent developments in the investigations of higher cognitive functions. The 14 chapters and the concluding overview are of consistently high standard. Several papers explore the morphological correlates of higher cognitive functions, like Scheibel's investigations of the dendritic arborisation or Diamond's excellent analysis of cortical changes brought about by learning and experience. Other chapters review physiological correlates of cerebral functions as afforded by modern imaging techniques. Even more traditional approaches are illuminated: Pandya and Yeterian give an overview of the architecture, neuronal circuitry and connections of the cerebral cortex against the background of brain evolution and function.

The weakest parts of the book are the discussions which conclude each chapter. These might have been interesting for the participants at the meeting in the heat of the argument, but fall flat for the reader removed from the immediacy of the symposium. This

book is recommended for all those who are interested in neurobiology of higher cognitive functions, be they basic neuroscientists or psychiatrists.

PL LANTOS

Subcortical Dementia. Edited by J L CUMMINGS (Pp 267; Price £35.00). Oxford University Press, 1990. ISBN 0-19-505716-3

The topic is clear. The editor defines subcortical dementia as a clinical syndrome characterised by bradyphrenia, impaired memory and executive function with mood and personality changes resulting from dysfunction of subcortical structures; the latter designated as white matter tracts connecting frontal lobe and subcortical nuclei. The problem is whether the condition exists. While the association of intellectual impairment with subcortical disease was proposed as early as 1861 by Charcot and Vulpian, and the term subcortical dementia was coined by von Stockert in 1932 when describing post-encephalitic disease and was resurrected in 1974 by Albert and colleagues in a study of progressive supranuclear palsy, the identity of the condition remains controversial.

Dr Cummings has assembled a formidable team to plead his case. Diverse presentations, historical, clinical, neuropsychological, anatomical, neuroimaging, theoretical, conceptual and terminological are lucidly argued. It is also frankly conceded that very few diseases are exclusively limited to subcortical structures and the reservations of those who are unable to distinguish allegedly characteristic neuropsychiatric profiles are fairly presented and considered. Nevertheless a scholarly, historical view of the evolution of the concept by Mandell & Albert still leaves the question undecided. It would appear that despite the surfeit of comments and opinions there is still a remarkable paucity of meticulous serial, clinical and psychological assessments and neuropathological correlations. Until this information is available, and it will require patient and arduous labouring in the clinical fields, dispute will continue as well as the need for stimulating books of this kind.

GERALD STERN

Ryan—A Mother's Story of her hyperactive—Tourette Syndrome Child. By SUSAN HUGHES (Pp 149; Price \$9.95). Duarte, CA: Hope Press, 1990. ISBN 1-878267-26-4
Tourette Syndrome and Human Behavior. By DAVID E COMINGS (Pp 828; Price \$39.95). Duarte, CA: Hope Press, 1990. ISBN 1-878267-28-0

David Comings believes that the Gilles de la Tourette syndrome should be perceived as one clinical manifestation of an autosomal dominantly inherited neurobehavioural genetic disorder that may also cause attention deficit disorder and hyperactivity, obsessional-compulsive disorder, conduct disorder, dyslexia, anxiety with phobias and panic attacks, alcoholism and drug dependency, eating disorders, pathological gambling and periodic behaviours such as rage attacks and

the premenstrual syndrome. This is in sharp contrast to the concept put forward some years ago by the Shapiros who considered Gilles de la Tourette syndrome to be a specific neurological disease and that tics are akin to other abnormal movement disorders such as dystonia and chorea. Despite the fact that *Tourette Syndrome and Human Behavior* was written with the lay reader and health or educational professional in mind it is a large tome containing 828 pages and 630 illustrations.

Comings confesses that it was conceived at a stage when his own ideas about Gilles de la Tourette syndrome were evolving and new biological information about the condition was flooding in. Instead of returning to his manuscript and shuffling the text to accommodate these changes he has heretically opted to add on new ideas and data as they became available giving the overall impression of a book with no beginning or end, ebbing and flowing on a fertile sea of popular science.

Comings flits delightfully and capriciously over his subject matter interspersing chapters on neurogenetics with alcoholism and sexual deviancy with tryptophan metabolism; and somehow despite the impulsive helter skelter of thought the book makes enjoyable and informative reading. I was disappointed with the case histories which were terse and sterile and failed to portray any better than descriptive text would have done the difficulties experienced by patients with these problems. The book has a West Coast flavour to it and may not translate easily to a European lay audience. However, it reflects accurately Comings's expansive genetic viewpoint about Gilles de la Tourette syndrome and will be read with avid fascination by physicians and others involved in the management and care of those with this long-neglected, distressing condition.

The second book, also published by Hope Press, is a moving account of a mother's experience in coping with her son's Gilles de la Tourette syndrome. It is written compassionately and conveys to a lay reader the horrific social traumas which Tourette syndrome may cause. It outlines the trials and tribulations resulting from the associated behaviour disturbances in a way which no textbook could, and the difficulties many families meet in attempting to obtain even a correct diagnosis, never mind appropriate treatment. The book contains a large number of helpful coping strategies for families and re-emphasises the old adage that having a name for one's medical condition is a reassurance not just for the physician, but also for the patient, and a source of comfort and hope for relatives. Perhaps these two books should be sold together as a package as they complement one another extremely well. I now routinely recommend this book to parents of children with Tourette syndrome, most of whom have commented that they have found it a blessing rather than a frightening saga of what lies in store.

A J LEES

Brain Edema: Pathogenesis, Imaging and Therapy. (Advances in Neurology, Vol 52). Edited by D M LONG (Pp 588; Price: \$154.00) 1990. New York, Raven Press. ISBN 0-88167-625-X

This volume is the latest in this series of

monographs and is based on the meeting of the International Society for the Study of Brain Edema held in Baltimore, Maryland, USA in 1987. It is made up of 68 Papers and 22 Abstracts comprising presentations from over 200 contributors.

With increasing specialisation it is very difficult to keep abreast of all the developments that are taking place within the Neurosciences. The publication of series such as *Advances in Neurology* is therefore timely providing in this volume with a comprehensive amount of information of a clinical, investigative and an experimental nature. The importance of brain edema is stressed by its frequent occurrence in patients following stroke, trauma and in association with tumour. In spite of modern non-invasive investigative techniques it remains somewhat of an enigma, although an increasing amount of knowledge about its pathogenesis is providing a more rational basis for therapy. The complexity of brain edema is shown by the large number of laboratory studies that report the diverse mechanisms and mediators of edema. Such understanding provides the basis of pharmacological intervention, the range of therapies now including calcium channel blockers, osmotic agents and steroids.

Although the information within this volume is dated by several years it nevertheless brings together a wide ranging literature that provides a comprehensive review for both expert and non-expert alike and as such is a ready source of reference material. Dr Long is to be congratulated on standardising the text of the various contributions most of which are well written and concise. It is therefore easy to recommend this additional volume to neuroscientists.

D I GRAHAM

SAQ's in Psychiatry. By D BHUGRA. (Pp 152; Price: £9.95) Guildford, Butterworth Scientific Ltd. 1990. ISBN 0-407-01887-5

The title of this short book may be unfamiliar to many readers. SAQ's stands for Short Answer Questions, which come midway between multiple choice questions (MCQ's) and essays and are now part of the MRCPsych examination. Each SAQ should be completed in about 5 minutes so it is important for candidates to have knowledge at their fingertips and to be able to express it succinctly.

In this short book Dr. Bhugra gives the answers to nearly 300 questions in SAQ format and these are accompanied by notes on the strategy of tackling SAQ's and key references from books and journals. Nearly half of the book is concerned with questions on general psychiatry but there are separate sections for each of the major relevant specialties, including neuro-anatomy, psychology, statistics and the psychiatry of mental handicap. The book is nicely laid out and the model answers are succinct and generally comprehensive. I detected one error—the Hospital Anxiety and Depression Scale is not an observer inventory—and the description of frontal lobe syndrome omits the specific clinical features and concentrates only on personality and mood change. However, minor errors are almost always unavoidable in books of this nature and could easily be ironed out in subsequent editions.