The Vegetative State: Medical Facts, Ethical and Legal Dilemmas

"...the brain is a mystery and even more so in this state..." says the nurse caring for a beautiful dancer in a vegetative state in Academy Award Winner Pedro Almodóvar’s most recent motion picture “Hable con Ella” (Talk to her). Chronic coma (which is much more rare in clinical practice than it is in Hollywood scenarios) a vegetative state, especially unexpected recovery from it, have always incited the media and public. In “The vegetative state: Medical facts, ethical and legal dilemmas” Emeritus Professor of Neurosurgery Bryan Jennett from the University of Glasgow eloquently reviews 30 years of personal experience with one of the most devastating medical conditions modern medicine has created: a permanent state of wakefulness without awareness. A state where patients awaken from their coma but fail to show any evidence of a working mind; as Professor Jennett, together with co-author neurologist Professor Fred Plum from New York, first coined this condition in his landmark Lancet paper of April 1, 1972. Two years later he would, in the same journal now together with Professor Teasdale, first publish on the renowned Glasgow Coma Scale. Unrivalled authority in the field, Professor Jennett extensively discusses the diagnostic criteria, epidemiology and prognosis of the vegetative state. The first important thing to acknowledge about a diagnosis of a "vegetative state," is that it is a harsh term that seems to imply what is not, or should not, be intended. That is, it does not mean that the patient has ceased to be a human person with the dignity of every other human person. For many, the term indeed is potentially pejorative if misunderstood by families or carers as being synonymous with "vegetable": Second, it is important to stress that the vegetative state is a clinical condition that can be partially or totally reversible. Too often it is taken inappropriately to indicate permanence of an unresponsive state by healthcare workers and may then lead to withholding of opportunities for rehabilitation and restriction or limitation of access to other treatments, especially in the acute phase. Third, the abbreviation PVS often leads to misinterpretation by health professionals and lawyers. In this monograph, Professor Jennett regretfully uses PVS for permanent vegetative state, unlike many other authors who use this abbreviation for persistent vegetative state. This might confuse the vital distinction between permanent vegetative state, meaning irreversible and potentially leading to withdrawal of artificial nutrition and hydration, and persistent vegetative state, meaning a vegetative state that lasts for some period of time (one month after the insult according to the Multi-Society Task Force) and not at all excluding functional recovery. Revalidation therapy and underlying physiopathology are less well covered by the author, possibly reflecting the lack of scientific data on these issues; even if recent data on neuromodulation, magnetencephalography and PET imaging might have been worth mentioning. In my view, Professor Jennett’s major accomplishment is his exceptionally comprehensive review of the moral and legal issues surrounding the care of patients in the permanent vegetative state. Of its 228 pages this part takes about two thirds of the book and summarises the legislation in the United States, Britain, South Africa, New Zealand, Australia, Canada and European Countries. It ends with a clearly written description of landmark cases that went to court. In conclusion, the book well meets its title and should be unreservedly recommended to anyone who takes care of these people medically, legally, theologically or scientifically.

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Imaging of Orbital and Visual Pathway Pathology

Published as the first textbook to deal with imaging of pathology of the entire visual system, the book is aimed at radiologists, ophthalmologists, neurologists, neurosurgeons, and ENT specialists. There are chapters on imaging methods, specifically colour Doppler ultrasonography, computed tomography and magnetic resonance imaging, on anatomy with imaging correlates, and on functional magnetic reso- nance imaging. The book is a “Shooshnagh’s Neuro-ophthalmology, a special section on optic pathway pathology in children, a chapter on orbital pathology comprising almost 200 pages and a chapter on intracranial pathology comprising about 90 pages. The text is organised according to pathology with generally an easy to read style.

The book’s most remarkable characteristic, a great testament to the editor, is the immense collection of high quality CT and MRI scans. It is a wonderful reference for busy clinicians, ophthalmologists, neurologists, neurosurgeons, and ENT specialists who need to confirm whether imaging is consistent with the clinical diagnosis. They will also appreciate the early chapters on imaging methods and anatomy. The organisation of the text may make it less immediately helpful but still highly useful to radiologists, both neuro-radiologists but more especially those not regularly reporting orbital or head scans, trying to make a diagnosis from the imaging.

The value of the section on neuro-ophthalmology is somewhat unclear. The idea is good but most readers will be overwhelmed by the detailed discussion of the organisation of the visual and ocular motor systems. A more thorough scheme of topographical diagnosis would have been helpful. There is no mention of the pattern of visual field loss specific to lateral geniculate lesions or lesions of visual cortical area V2. The discussion of nystagmus only mentions jerk nystagmus without any reference to the acquired pendular nystagmus of brainstem infarction or demyelination. In other chapters there are superficial discussions of disease pathogenesis, such as for multiple sclerosis.

The reader needs to be wary of the advice on clinical management. Optic nerve compression in dysthyroid eye disease is not “a conclusive indicator for surgical intervention”. Systemic steroids and radiotherapy also play important roles. “To state that in idiopathic intracranial hypertension “conser- vative therapy consists of medication with acetazolamide and/or prednisolone” misrepresents the role of steroid therapy which is infrequently used. Many readers will find the terminol- ogy and phraseology irritating at times. The terms hypomochlon and phlegmogen are not in regular use. Optomotor is unfamiliar and clumsy compared to ocular motor. “Drusen of the optic head consists of a primarily auto- somal-dominant primary uveomacular macular deposit with blurred papilla, but only subclinical visual field deficits, a differential diagnosis to papiledema in idiopathic cerebral hypertension, and demonstrates calcification of the optic head” will send many a head spinning! There are also a number of factual errors, for example Parinaud’s syndrome is characterised by vertical not horizontal gaze paralysis.

The ultimate reference book in neuro-ophthalmology remains Walsh and Hoyt’s Clinical Neuro-Ophthalmology, now consisting of 5 enormous volumes and full to the brim with similar quality scans but not necessarily available to most neurologists. In comparison this book’s emphasis on orbital pathology will reduce its appeal to neurologists, even those with a particular interest in neuro-ophthalmology, but it would be a useful addition to neurology department libraries.

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