ELSEVIER

NeuroRehabilitation 6 (1996) 1–2

NeuroRehabilitation
An Interdisciplinary Journal

Introduction

As medical technology improves, survival rates for severe brain injury increase. During the last two decades, we have seen the advent of new and refined neurosurgical and neuropharmacologic techniques that have demonstrated their capacity to reduce mortality. Unfortunately, many survivors of severe brain injury remain in prolonged or permanent states of consciousness characterized by minimal responsiveness. A variety of different terms have been assigned to individuals with severe alterations in consciousness including 'low level', 'coma-emerging' and 'minimally responsive.' In this population, morbidity is significant and the cost of care exceedingly high.

Recently, patients in 'low level' (referring to the Rancho Levels of Cognitive Functioning Scale) neurologic states have been the subject of considerable controversy and debate. This debate has been fuelled largely by the publication of position statements in both rehabilitation and neurology concerning the diagnosis, prognosis and treatment of patients with severe alterations in consciousness. While initially, there were significant differences of opinion, the debate progressively evolved into a process of consensus building within and between the rehabilitation and neurology communities.

Continuing the spirit of collaboration, this issue of NeuroRehabilitation includes articles authored by representatives from neurology as well as rehabilitation. It is intended to provide a review of the salient issues facing clinicians charged with the evaluation and care of comatose, vegetative and minimally responsive patients.

The issue begins with a provocative article by Dr. Nathan Zasler on the recent changes and controversies regarding nomenclature pertinent to this population. To date, the use of appropriate diagnostic and prognostic terminology has been inconsistent, at best. It is expected that this article will clarify some of the ambiguities and confusion associated with the relevant nomenclature on this topic.

Dr. Elizabeth Sandel provides a comprehensive overview of the types of medical complications that often arise following severe brain injury and offers suggestions for management of these disorders. Algorithmic approaches to the assessment of some of these conditions are also offered.

Dr. Ross Zafont and colleagues discuss the slippery slope of predicting outcome during the acute and post-acute periods of recovery. The information summarized in this article is based on a comprehensive review of the literature on this subject and should be of assistance to the clinician responsible for establishing prognoses at various points in the recovery course.

The critical, yet often overlooked, role of the rehabilitation nurse in the care and management of the low level patient is described by Terri Antionette, RNC. Ms. Antionette highlights the multiplicitous nature of the rehabilitation nurse's responsibilities, which cut across medical, behavioral and psychological domains.

Dr. Michael O'Dell and colleagues provide comparative data and observations on the clinical and neurometric qualities of four recently pub-

1053-8135/96/$15.00
SSDI 1053-8135(95)00142-U

lished, standardized methods of assessing neurologic responsiveness: the Coma-Near Coma Scale (CNC), Coma Recovery Scale (CRS), Sensory Stimulation Assessment Measure (SSAM) and the Western Neuro Sensory Stimulation Profile (WNSSP). A group of 10 minimally responsive patients are followed from admission to discharge on the CRS, WNSSP and CNC in order to compare the utility of these instruments. Preliminary recommendations for selecting among these measures are also provided.

Dr. Elie Elovic presents a review of the neurophysiology and neuroanatomic substrate mediating arousal functions. He also discusses the effects of various neuropharmacologic interventions on arousal and outlines the clinical rationale underlying their use. Physicians responsible for prescribing and monitoring the efficacy of drug treatments will find this article useful in guiding decision making.

One of the more controversial issues encountered in rehabilitation, the use of sensory stimulation to promote neurologic recovery, is discussed by Joseph T. Giacino. Dr. Giacino discusses theoretical rationales for and against the use of sensory stimulation, as presented by its proponents and critics. He goes on to provide a critical review of representative studies on the effectiveness of sensory stimulation and provides preliminary recommendations for use of this type of intervention.

The final article, written by Dr. Jay Rosenberg, Chair of the Quality Standards Subcommittee of the American Academy of Neurology, and Dr. Stephen Ashwal, co-author of the Multi-Society Task Force on the Persistent Vegetative State sponsored by the American Neurological Association, discusses the method through which practice parameters are developed. The authors continue with a review of the diagnostic and prognostic criteria for the vegetative state and conclude with a brief discussion of a consensus building project recently designed to establish and disseminate practice guidelines on the vegetative state.

It is hoped that this issue of NeuroRehabilitation will advance the process of establishing standards of care for patients in low level neurologic states and will foster further dialogue and research in this area.