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in Neurosurgery and
Neurotraumatology

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Preface

Rehabilitation in Neurosurgery is not a new task but rather an indispensable part of neurological surgery from the beginning, intended to avoid or to improve diagnosable or impending damage to the CNS, and to prevent secondary and tertiary complications by adequate therapeutic measures. Rehabilitation should start right at the onset and site of the acute impact to the brain, spinal cord or peripheral nerves. Thanks to the tremendous progress in modern neurosurgery regarding microsurgical techniques, instruments, sophisticated technologies, multidisciplinary team approaches, neuro-imaging, neuropharmacology, antibiotics, neuroanaesthesiology, and intensive care treatment, more and more patients frequently survive even life threatening lesions to the brain and spinal cord, however, at the expense of severe sensory, motor and neuropsychological deficits, and long lasting disabilities. Therefore neurosurgeons taking care of the acute treatment, e.g. sophisticated operations in tumour and vascular pathology or neurotraumatology, have to be aware of the early and late sequelae. This means that neurosurgeons should be made familiar with neurorehabilitative measures to protect patients from secondary and tertiary complications and to facilitate the natural progress of recovery by restoration and compensation.

Functional electrical stimulation, neuromodulation, bio-implants and neuroprosthesis open up a most important field of functional neurosurgical rehabilitation covering movement disorders, spasticity, epilepsy, pain, and vegetative state. During the past years neurosurgeons have become increasingly involved in the broad *spectrum of neurorehabilitation* and have established special units associated with their neurosurgical institutions. As a typical example a unit for Neurosurgical Rehabilitation was set up in my department and a special clinic, respectively, near Münster, Germany. Therefore the delegates of the WFNS Committee on Neurorehabilitation, established in 1997, decided to organise the first International Conference

on Neurosurgical Rehabilitation in Münster, offering the opportunity to visit various types of neurosurgical rehabilitation facilities. During this conference it became apparent that neurorehabilitation had been neglected by most of the neurosurgeons around the world during the second half of the last century and it was agreed to improve on this situation by publishing the results of their work as a special volume.

Selected papers from another two meetings (the 5th Annual Meeting of the Euroacademy of Multidisciplinary Neurotraumatology, organised in conjunction with the Meeting of the European Brain Injury Society and France Traumatism Cranien, Paris, organized by the Congress President Jean Luc Truelle, on September 20–23, 2000; Workshop on Early Rehabilitation, Maribor, Chair Matej Lipovšek, March 29–31, 2001) were collected to present a comprehensive overview of concepts, strategies, state-of-the-art treatment and results of early and longlasting neurorehabilitation and reintegration into the social environment. The authors are neurosurgeons, neurologists, neuropsychologists and members of neighbouring disciplines, all deeply engaged in modern neurorehabilitation work.

If this issue contributes to propagate modern and future orientated findings in the field of rehabilitation in neurosurgery and neurotraumatology, and, by its multidisciplinary approach, helps to improve the quality of life of patients suffering from TBI and SCI impairments, it will have fulfilled its purpose.

This first volume in a new series on Rehabilitation in Neurosurgery will be a first step in that direction, and we all are very grateful to H. J. Reulen, Editor of the Supplement Volumes of *Acta Neurochirurgica*, and Springer Verlag Wien to publish this special issue on Rehabilitation in the Proceedings Series of *Acta Neurochirurgica*, the *European Journal of Neurosurgery*. We extend our thanks to all authors who did their best to make this supplement a success, especially J. L. Truelle and D. Mendelow as well as M. Lipovšek,

my co-workers, for reviewing the papers. In particular thanks to the personal commitment and circumspect management of Mrs. I. Anders, and Mrs. S. Schilgerius from Springer Verlag Wien and last but not least, Mrs. G. Kühling, my secretary, to eventually make this volume a success.

Financing of an international congress and the subsequent proceedings has always been a great problem, particularly so in neurorehabilitation. We therefore express our gratitude especially to Dipl. Ing. Dr. h.c. Ferdinand Piech, President of the Volkswagen AG, for

his commitment as well as Dr. Christian Ebenezzer, IPSEN-Pharma for his personal involvement and generous support.

Klaus R. H. von Wild

Chairman of the WFNS Neurorehabilitation
Committee

President of the EMN

Incoming Chair of the EFNS-Scientists Panel on
Neurotraumatology

Contents

Part I: Neurosurgical Rehabilitation, Current Concepts, Strategies, and Outcome	1
<i>K. R. H. von Wild:</i> Neuro-Rehabilitation – a Challenge for Neurosurgeons in the 21st Century. Concepts and Visions of the WFNS Committee on Neurosurgical Rehabilitation.....	3
<i>E. Ortega-Suhrkamp, R. H. von Wild:</i> Standards of Neurologic-Neurosurgical Early Rehabilitation	11
<i>M. Lippert-Grüner, C. Wedekind, R.-I. Ernestus, N. Klug:</i> Early Rehabilitative Concepts in Therapy of the Comatose Brain Injured Patients.....	21
<i>B. Hoffmann, K. R. H. von Wild:</i> Incidence and Management of Complications During Posttraumatic Early Rehabilitation	25
<i>E. Ortega-Suhrkamp:</i> Early Functional Outcome in Isolated (TBI) and Combined Traumatic (CTBI) Brain Injury	31
<i>B. Hoffmann, C. Düwecke, K. R. H. von Wild:</i> Neurological and Social Long-Term Outcome after Early Rehabilitation Following Traumatic Brain Injury, 5 Year-Report on 240 TBI Patients.....	33
<i>B. Kemper, K. von Wild:</i> Requirements of Team Effectiveness in Neurosurgical Rehabilitation	37
<i>S. Gilbertson, W. Ischebeck:</i> Merging Pathways: Music Therapy in Neurosurgical Rehabilitation	41
<i>R. D. Voogt:</i> The Impact of Treatment on Survival Roles of a Person with a Traumatic Brain Injury	43
<i>R. Avesani, Z. Cordioli, G. Salvi:</i> A Computerized Version of EBIS Evaluation Chart and its Opportunities in the Rehabilitation Program of TBI Patients	45
<i>J. M. Mazaux, P. Croze, B. Quintard, L. Rouxel, P. A. Joseph, E. Richer, X. Debelleix, M. Barat:</i> Satisfaction of Life and Late Psycho-Social Outcome after Severe Brain Injury: A Nine-Year Follow up Study in Aquitaine.....	49

<i>M. Vanier, J. Lamoureux, E. Dutil, S. Houde:</i> Clinical Efficacy of Stimulation Programs Aimed at Reversing Coma or Vegetative State Following Traumatic Brain Injury.....	53
<i>D. N. Brooks:</i> What is a Good Re-Entry Programme? What are the Key Questions? – <i>J. Douglas Miller Memorial Lecture</i>	59
<i>D. N. Cope, E. D. Bryant, P. Sundance:</i> Health Management Technology for Complex Medical Conditions.....	61
Part II: Functional Neurosurgery and Neuromodulation	65
<i>C. A. Pagni, S. Canavero, V. Bonicalzi, C. Nurisso:</i> The Important Role of Pain in Neurorehabilitation. The Neurosurgeon's Approach.....	67
<i>S. Gatscher, R. Becker, E. Uhle, H. Bertalanffy:</i> Combined Intrathecal Baclofen and Morphine Infusion for the Treatment of Spasticity Related Pain and Central Deafferentation Pain	75
<i>R. Becker, S. Gatscher, U. Sure, H. Bertalanffy:</i> The Punctuate Midline Myelotomy Concept for Visceral Cancer Pain Control Case Report and Review of the Literature	77
<i>T. Yamamoto, Y. Katayama, H. Oshima, C. Fukaya, T. Kawamata, T. Tsubokawa:</i> Deep Brain Stimulation Therapy for a Persistent Vegetative State.....	79
<i>J. Vesper, F. Klostermann, Th. Funk, F. Stockhammer, M. Brock:</i> Deep Brain Stimulation of the Globus Pallidus Internus (GPI) for Torsion Dystonia A Report of two Cases	83
<i>Y. Katayama, H. Oshima, C. Fukaya, T. Kawamata, T. Yamamaoto:</i> Control of Post-Stroke Movement Disorders Using Chornic Motor Cortex Stimulation.....	89
<i>P. Boon, K. Vonck, P. Van Wallegghem, M. D'Havé, J. Caemaert, J. De Reuck:</i> Vagus Nerve Stimulation for Epilepsy, Clinical Efficacy or Programmed and Magnet Stimulation	93
<i>K. von Wild, P. Rabischong, G. Brunelli, M. Benichou, K. Krishnan:</i> Computer Added Locomotion by Implanted Electrical Stimulation in Paraplegic Patients (SUAW)	99
<i>H. E. van der Aa, G. Bultstra, A. J. Verloop, L. Kenney, J. Holsheimer, A. Nene, H. J. Hermens, G. Zilvold, H. P. J. Buschman:</i> Application of a Dual Channel Peroneal Nerve Stimulation in a Patient with a "Central" Drop Foot.....	105
<i>J. Kuchta, R. Behr, M. Walger, O. Michel, N. Klug:</i> Rehabilitation of Hearing and Communication Function in Neurofibromatosis Type 2	109
<i>J. D. Rollnik, R. Dengler:</i> Electrical Stimulation of the Sural Nerve Partially Compensates Effects of Central Fatigue	113
<i>S. Hesse, C. Werner, A. Bardeleben, B. Brandl-Hesse:</i> Management of Upper and Lower Limb Spasticity in Neuro-Rehabilitation.....	117
<i>J. D. Rollnik, R. Dengler:</i> Botulinum Toxin (DYSPORT) in Tension Type Headaches	123

Contents	IX
Part III: Extended Abstracts	127
<i>X. L. Zhu, W. S. Poon, C. Chan, S. Wai, M. K. Tse, S. Chan, S. Yiu, S. Tang, K. Fung, C. Y. Pang, A. Chan, E. Lai, D. Cheung:</i> Does Intensive Rehabilitation Improve the Functional Outcome of Patients with Traumatic Brain Injury (TBI)? Cognitive Function Result of a Randomised Controlled Trial	129
<i>F. Danze, P. Rigaux, D. Darriet, B. Veys, A. Weber, Ph. Lourdel:</i> Post Traumatic Vegetative States: Cost of Care	129
<i>H. Holzer:</i> Psychotherapeutic Aspects on Early Neurorehabilitation in ICU	130
<i>A.-L. Christensen:</i> Neuropsychological View on Early Neurorehabilitation – View from Denmark	130
<i>A. Nordenbo:</i> Neurorehabilitation the Danish Concept	131
<i>M. Lipovšek:</i> Early Neurorehabilitation – Neurosurgical View	132
<i>E. Lannoo, W. Brusselmans:</i> The TORNEO Project for Professional Reintegration of People with Acquired Brain Injury	134
<i>M. Marinescu, R. Rusina, Z. S. de Boisgeheneuc, J. L. Truelle:</i> B.N.I., a New Tool for Rapid Evaluation of Higher Cerebral Functions of Traumatic Brain Injured Patients	134
<i>E. Ortega-Suhrkamp, S. Mundiyanapurath:</i> Thoughts on Early Neuro Rehabilitation (ENR) in Germany and Own Experience	134
<i>Y. Kato, H. Sano, S. Nagahisa, S. Iwata, T. Kanno:</i> Combating Brain Attack: Therapeutic Strategies for Patients with Subarachnoid or Intracerebral Haemorrhage of Grave Prognosis	137
<i>A. Fukunaga, K. Uchida, H. Kashima, J. Hashimoto, T. Kawase:</i> Neuropsychological Evaluation of the Patients with Unruptured Cerebral Aneurysms Combined with Asymptomatic Cerebral Infarction before and after Surgery	138
<i>T. von Wild, G. H. Schneider, T. Bardt, W. Lanksch, A. Unterberg:</i> Neurological Outcome after Decompressive Craniectomy (DC) in 39 Patients Suffering from Middle Cerebral Artery (MCA) Infarction	138
<i>F. A. Serbinenko, A. G. Lysachev, L. B. Likhterman, A. A. Potapov, A. D. Kravtchouk:</i> Sequelae of Damage to Extra-Intracranial Arteries Following Head Injury	139
<i>T. Kanno:</i> Dorsal Column Stimulation for Arousal of Coma	139
<i>J. Ciurea, A. V. Ciurea, Ileana Simoca, R. Perin, D. Mircea, Al. Constantinovici:</i> Patients with Prolonged Consciousness Disturbances and Brain Electrical Stimulation Therapy	139

<i>Th. Paehge, Th. Sprenkel, K. von Wild:</i> Vigilance Enhancing Effect of Botulinum Toxin A (BtxA) after Local Application in Vegetative Patients with Severe Spasticity Following Traumatic Brain Injury (TBI).....	140
<i>G. Polonara, M. Signorino, A. Messori, F. Angeleri, U. Salvolini:</i> Post Traumatic Epilepsy and Two-Year MRI Follow-up of Head Trauma: A Prospective Study.....	140
<i>V. V. Belopassov, I. G. Ismailova:</i> Characteristics of Emotional Personality Disturbances in Adolescents with Chronic Post-Traumatic Headaches (CPTH) after Mild Traumatic Brain Injury (MTBI).....	140
<i>B. Benz, A. Ritz, S. Kiesow:</i> Longterm Neuropsychological Outcome after Childhood Traumatic Brain Injury (TBI): Effects of Age at Injury	141
<i>T. W. Teasdale, A. A. W. Engberg, T. W. Teasdale:</i> Suicide Following Traumatic Brain Injury: A Population Study.....	141
<i>M. Leclercq, G. Deloche, M. Rousseaux:</i> Attentional Complaints of Professionals are More Accurate than Patients' and Relatives' Complaints Following Severe Traumatic Brain Injury.....	142
<i>J. Couillet, M. Leclercq, M. Rousseaux, Y. Martin, P. Azouvi:</i> Divided Attention after Severe Diffuse Traumatic Brain Injury.....	142
<i>M. Chevignard, P. Pradat-Diehl, B. Pillon, C. Taillefer, S. Rousseau, C. Le Bras, B. Dubois:</i> An Ecological Approach of a Dysexecutive Syndrome.....	142
<i>L. Mailhan, P. Azouvi, J. L. Truelle, A. Dazord:</i> Quality of Life 2 to 6 Years after Severe Traumatic Brain Injury (TBI)	143
Author Index	145
Index of Keywords	147

Listed in Current Contents