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A quality network model for symptom management and daily care of multiple sclerosis patients

P. Rieckmann on behalf of the Task Force Essentials Group of the European Charcot Foundation
Würzburg, Germany

Although effective immunomodulatory treatment strategies exist to influence disease activity in multiple sclerosis there is still an urgent need to optimize disease symptoms and quality control for individual patients. An international task force essentials group supported by the European Charcot Foundation was established to develop measures of the quality of MS care in Europe. Decision making algorithms for nine critical domains of disease management (disability, spasticity, ataxia, pain, cognition, mood, fatigue, bladder function and sexual activity) and 'educated guesses' have been developed to measure interventions and outcomes which reflect the quality of clinical strategies. A quality network, consisting of a group of clinics connected to a central server, which has already successfully been applied to the care of diabetes patients across Europe, will now be developed and applied to MS management. It will provide clinicians with longitudinal epidemiological data and will generate treatment algorithm for improved quality care of MS patients. This quality network will next be validated in a one-year pilot study using a net of 10 European clinics. In addition, an extended European network working in a learning environment will continuously assess, update and improve the quality of care of MS patients.

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Treatment trials in MS: planning protocols for a new era

L. Kappos
Outpatient Clinic for Neurology and Neurosurgery, University Hospitals, Kantonsspital Basel, Petersgraben 4, CH-4031 Basel, Switzerland

The complexity of therapeutic approaches to multiple sclerosis, including the necessity of assessing combination treatments, requires highly sensitive and reliable outcome measures. While clinical measures remain the gold standard, due to disease inherent reasons, they do not allow fast and reliable assessment of treatment. Magnetic resonance imaging, as far as the 'classical' T2 and proton density plane and Gd-enhanced T1 sequences are concerned, have only a low correlation with clinical parameters and especially in already established disease have only a low predictive value. Nevertheless neuroimaging still seems to be the most promising candidate for a reliable surrogate marker in clinical trials. This is due to emerging evidence about new MRI measures like T1 black holes, magnetization transfer, spectroscopic imaging, diffusion imaging and others that seem to better correlate both with pathology as evidenced in necropsy and autopsy and also with longterm disability progression. A review of recent data on the advantages and disadvantages of MR parameters as surrogate markers will be provided and also available evidence on the value of other putative surrogates like evoked potentials, blood and CSF analysis.

Hyperbaric oxygenation: a new therapy for acute brain injury (traumatic and vascular)

FW8–1

Introduction

F. Gerstenbrand
Vienna, Austria

Hyperbaric Oxygenation was originally developed for the treatment of diving accidents. This kind of treatment succeeded to influence positively injuries of spinal cord and brain, even in lots of cases to avoid them. The idea to use Hyperbaric Oxygenation with acute diseases of brain and spinal cord was caused by the reflection to transport more oxygen into the penumbra, that part of the brain which is damaged. Already the very first treatments showed good results. There are already discussions of the biochemic and physic bases of the treatment. Models for the treatment of a better oxygenation of predamaged parts of the brain are as well the acute stroke and the acute brain injury.
At this workshop the possibilities of new concepts of therapy and the necessary programs will be discussed.

FW8–2

Generic inhibitory drug effect of hyperbaric oxygen therapy (HBOT) on reperfusion injury (RI)

P. G. Harch
LSU School of Medicine, New Orleans, LA, USA

Introduction HBOT is the use of high pressure O_2 as a drug to treat pathophysiologic processes and their diseases. The purpose of this paper is to see if HBOT has a generic inhibitory drug effect on RI.
Methods Review of animal studies on HBOT in RI.
Results

HBOT with Respect to Ischemia									
Pre	During	Post	Study	Date	Species	Organ	Model Ischemia	Effect	HBOT Dose (ATA)
	X	X	Thomas	'90	Dog	Heart	MI	Ågr;	2.0
	X	X	Zamboni	'93	Rat	Muscle	Global	Ågr;	2.0
X	X	X	Thom	'93	Rat	Brain	CO	Ågr;	.21, 1, 2, 3
	X	X	Yamada	'95	Rat	Intestine	Global	Ågr;	2.0
		X	Mink	'95	Rabbit	Brain	Air Embol	Ågr;	2.8
	X		Atochin	'99	Rat	Brain	Stroke	Ågr;	2.8

Six models in 4 different organs and 3 species showed HBOT inhibition. One model used a dose response design and showed a positive effect.
Conclusion HBOT acts like a generic drug to inhibit RI by showing dose response and timing characteristics across multiple species/organs/ischemic models before, during, and within 1 h post ischemia at ≥ 2 ATA.

FW8–3

Protection and repair of the blood–brain barrier

P. B. James
Wolfson Hyperbaric Medicine Unit, University of Dundee, UK

The blood–brain barrier has been the subject of academic interest since the discovery by Ehrlich in 1875 that injected vital dyes did not penetrate the nervous system. The concept has only recently had an impact in neurology, following the recognition of focal blood–brain barrier failure as the primary event in demyelinating disease. The endothelial barrier, which is present from the major arteries through to the veins of the CNS has tight

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