

Contents

Importance of the Work of Professor Marmarou

Fifth International Hydrocephalus Workshop, Crete, Greece, May 20–23, 2010: Themes and Highlights	1
Harold L. Rekate, Gunes A. Aygok, Kostantinos Kouzelis, Petra M. Klinge, and Michael Pollay	

Modeling of CSF Dynamics: Legacy of Professor Anthony Marmarou	9
Marek Czosnyka, Zofia Czosnyka, Kiran J. Agarwal-Harding, and John D. Pickard	

Importance of Data, Especially from Randomized Controlled Trials

Ethical Considerations in Hydrocephalus Research That Involves Children and Adults	15
Michael A. Williams	

Conservative Versus Surgical Management of Idiopathic Normal Pressure Hydrocephalus: A Prospective Double-Blind Randomized Controlled Trial: Study Protocol	21
Ahmed K. Toma, Marios C. Papadopoulos, Simon Stapleton, Neil D. Kitchen, and Laurence D. Watkins	

Ten Years of Clinical Experience in the Use of Fixed-Pressure Versus Programmable Valves: A Retrospective Study of 159 Patients	25
Maria Mpakopoulou, Alexandros G. Brotis, Haralampos Gatos, Konstantinos Paterakis, and Kostas N. Fountas	

Magnetic Resonance Imaging as a Powerful Tool

Changes of Fractional Anisotropy and Apparent Diffusion Coefficient in Patients with Idiopathic Normal Pressure Hydrocephalus	29
Koichiro Demura, Mitsuhito Mase, Tosiaki Miyati, Tomoshi Osawa, Manabu Hattori, Harumasa Kasai, Masaki Hara, Yuta Shibamoto, and Kazuo Yamada	

Virchow-Robin Spaces in Idiopathic Normal Pressure Hydrocephalus: A Surrogate Imaging Marker for Coexisting Microvascular Disease?	33
Andrew Tarnaris, J. Tamangani, O. Fayeye, D. Kombogiorgas, H. Murphy, Y.C. Gan, and G. Flint	

Quantification of Normal CSF Flow Through the Aqueduct Using PC-Cine MRI at 3T	39
Eftychia Kapsalaki, Patricia Svolos, Ioannis Tsougos, Kyriaki Theodorou, Ioannis Fezoulidis, and Kostas N. Fountas	
Correlation Between Tap Test and CSF Aqueductal Stroke Volume in Idiopathic Normal Pressure Hydrocephalus	43
Souraya El Sankari, A. Fichten, C. Gondry-Jouet, M. Czosnyka, D. Legars, H. Deramond, and Olivier Balédent	
Basic Science: The Aquaporin Story	
Overview of the CSF Dual Outflow System	47
Michael Pollay	
Hydrocephalus and Aquaporins: The Role of Aquaporin-1	51
M.Y.S. Kalani, A.S. Filippidis, and H.L. Rekate	
Hydrocephalus and Aquaporins: The Role of Aquaporin-4	55
A.S. Filippidis, M.Y.S. Kalani, and H.L. Rekate	
Effect of Acetazolamide on Aquaporin-1 and Fluid Flow in Cultured Choroid Plexus	59
Pouya A. Ameli, Meenu Madan, Srinivasulu Chigurupati, Amin Yu, Sic L. Chan, and Jogi V. Pattisapu	
Experimental Studies: Hydrocephalus	
Physical Phantom of Craniospinal Hydrodynamics	65
R. Bouzerar, M. Czosnyka, Z. Czosnyka, and Olivier Balédent	
Programmable Shunt Assistant Tested in Cambridge Shunt Evaluation Laboratory	71
Marek Czosnyka, Zofia Czosnyka, and John D. Pickard	
Simulation of Existing and Future Electromechanical Shunt Valves in Combination with a Model for Brain Fluid Dynamics	77
Inga Margrit Elixmann, M. Walter, M. Kiefer, and S. Leonhardt	
Examination of Deposits in Cerebrospinal Fluid Shunt Valves Using Scanning Electron Microscopy	83
Constantinos Charalambides and Spyros Sgouros	
Microstructural Alterations of Silicone Catheters in an Animal Experiment: Histopathology and SEM Findings	87
Regina Eymann, Yoo-Jin Kim, Rainer Maria Bohle, Sebastian Antes, Melanie Schmitt, Michael Dieter Menger, and Michael Kiefer	

Expression Analysis of High Mobility Group Box-1 Protein (HMGB-1) in the Cerebral Cortex, Hippocampus, and Cerebellum of the Congenital Hydrocephalus (H-Tx) Rat	91
Mitsuya Watanabe, Masakazu Miyajima, Madoka Nakajima, Hajime Arai, Ikuko Ogino, Sinji Nakamura, and Miyuki Kunichika	
Brain Localization of Leucine-Rich α2-Glycoprotein and Its Role	97
Madoka Nakajima, M. Miyajima, I. Ogino, M. Watanabe, Y. Hagiwara, T. Segawa, K. Kobayashi, and H. Arai	
Role of Artificial Cerebrospinal Fluid as Perfusate in Neuroendoscopic Surgery: A Basic Investigation	103
Masakazu Miyajima, Kazuaki Shimoji, Mitsuya Watanabe, Madoka Nakajima, Ikuko Ogino, and Hajime Arai	
Subdural or Intraparenchymal Placement of Long-Term Telemetric Intracranial Pressure Measurement Devices?	109
Melanie Schmitt, Regina Eymann, Sebastian Antes, and Michael Kiefer	
Clinical Studies: Hydrocephalus	
Twelve-Year Hospital Outcomes in Patients with Idiopathic Hydrocephalus.	115
George Stranjalis, T. Kalamatianos, C. Koutsarnakis, M. Loufardaki, L. Stavrinou, and D.E. Sakas	
What Is the Appropriate Shunt System for Normal Pressure Hydrocephalus?	119
Christos Chrissicopoulos, S. Mourgela, K. Kirgiannis, A. Sakellaropoulos, N. Ampertos, K. Petritsis, and A. Spanos	
Indications for Endoscopic Third Ventriculostomy in Normal Pressure Hydrocephalus.	123
Nikolaos Paidakakos, S. Borgarello, and M. Naddeo	
Role of Endoscopic Third Ventriculostomy in Treatment of Selected Patients with Normal Pressure Hydrocephalus	129
Kostas N. Fountas, Eftychia Z. Kapsalaki, Konstantinos N. Paterakis, Gregory P. Lee, and Georgios M. Hadjigeorgiou	
Endoscopic Third Ventriculostomy in Obstructive Hydrocephalus: Surgical Technique and Pitfalls	135
D. Bouramas, Nikolaos Paidakakos, F. Sotiriou, K. Kouzounias, M. Sklavounou, and N. Gekas	
Benign Cerebral Aqueductal Stenosis in an Adult	141
Christos Chrissicopoulos, S. Mourgela, N. Ampertos, A. Sakellaropoulos, K. Kirgiannis, K. Petritsis, and A. Spanos	

Efficacy and Versatility of the 2-Micron Continuous Wave Laser in Neuroendoscopic Procedures.	143
Florian H. Ebner, Christoph Nagel, Marcos Tatagiba, and Martin U. Schuhmann	
Complications of Endoscopic Third Ventriculostomy: A Systematic Review.	149
Triantafyllos Bouras and Spyros Sgouros	
Syndrome of Inappropriately Low-Pressure Acute Hydrocephalus (SILPAH)	155
Mark G. Hamilton and Angel V. Price	
Lhermitte–Duclos Disease Presenting with Hydrocephalus	161
Mun Sul Yang, Choong Hyun Kim, Jin Hwan Cheong, and Jae Min Kim	
Atypical Meningioma in the Posterior Fossa Associated with Colpocephaly and Agenesis of the Corpus Callosum.	167
Jin Hwan Cheong, Choong Hyun Kim, Mun Sul Yang, and Jae Min Kim	
Management of Intraventricular Hemorrhage in Preterm Infants with Low Birth Weight.	173
Takayuki Inagaki, Takuya Kawaguchi, Takahiro Yamahara, Naoyuki Kitamura, Takashi Ryu, Yo Kinoshita, Yasuo Yamanouchi, Kazunari Kaneko, and Keiji Kawamoto	
Pathophysiology of Brainstem Lesions Due to Overdrainage	177
Sebastian Antes, Regina Eymann, Melanie Schmitt, and Michael Kiefer	
Dynamics of Cerebrospinal Fluid Flow in Slit Ventricle Syndrome.	181
Regina Eymann, Melanie Schmitt, Sebastian Antes, Mohammed Ghat Shamdeen, and Michael Kiefer	
Quality and Safety of Home ICP Monitoring Compared with In-Hospital Monitoring.	187
Morten Andresen, Marianne Juhler, and Tina Nørgaard Munch	
Author Index	193
Subject Index.	195

Hydrocephalus

Selected Papers from the International Workshop in
Crete, 2010

Aygok, G.A.; Rekate, H.L. (Eds.)

2012, XII, 198 p., Hardcover

ISBN: 978-3-7091-0922-9