Barbiturate Protection in Acute Focal Cerebral Ischemia
Allan L. Smith, Julian T. Hoff, Surl L. Nielsen, and C. Philip Larson

Regional Cerebral Blood Flow in Acute Stroke: Preliminary Experience With the 133Xenon Inhalation Method
N. S. Rao, Z. A. Ali, H. M. Omar, and J. H. Halsey

The Effect of Sympathetic Denervation on Cerebral CO2 Sensitivity
H. L. Stone, M. É. Raichle, and M. Hernandez

The Value of Regional Cerebral Blood Flow Measurements Compared to Angiography in the Assessment of Obstructive Neck Vessel Disease
P. Prosenz, W-D Heiss, H. Tschabitscher, and L. Ehrmann

An Experimental Model of Brain Ischemia Combining Hypotension and Hypoxia
Frank Yatsu, Peter Lindquist, and Charles Graziano

Failures and Success in a Stroke Program
Robert S. Dow, H. Lenox Dick, and Fred A. Crowell

Lactate Uptake and Metabolism by Brain During Hyperlactatemia and Hypoglycemia
Edwin M. Nemoto, Julian T. Hoff, John W. Severinghaus

Comparison of Care and Cost Outcomes for Stroke Patients With and Without Home Care
Nancy H. Bryant, Louise Candland, and Regina Loewenstein

The Effects of Ventricular Tachycardia on Carotid Artery Blood Flow Velocity
Alberto Benchimol, Jose Baldi, and Kenneth B. Desser

Epidemiology of Stroke: Emphasis on Transient Cerebral Ischemia Attacks and Hypertension
Jack P. Whisnant

Hypertension and Risk of Stroke in an Elderly Population
Richard B. Shekelle, Adrian M. Ostfeld, and Harold L. Klawans, Jr.

The Veterans Administration Cooperative Study on Antihypertensive Agents. Implications for Stroke Prevention
Edward D. Freis

Stroke Surveillance: The Concept of Stroke Team in Diagnosis, Treatment and Prevention
Nemat O. Borhani

Stereospecific Permeability of Rat Blood-Brain Barrier to Lactic Acid
Edwin M. Nemoto, and John W. Severinghaus

Acute and Chronic Effects of Unilateral Cerebral Infarction on the EEG and Behavior of the Rat
W. C. Wiederholt, and Steven F. Pariser

(Continued)
# CONTENTS OF VOLUME V

Abstracts ................................................................. 92

News from the American Heart Association ......................... 105

Prologue to Guidelines for Stroke Care
Oscar M. Reinmuth ...................................................... 109

Report from the Joint Committee for Stroke Facilities —
X. Community Health Services for Stroke .......................... 115

No. 2 (March-April)

Cervical Carotid Imaging With a Continuous-Wave Doppler Flowmeter
Merrill P. Spencer, John M. Reid, and Paul S. Paulson ............... 145

The Effects of Iodinated Contrast Agents on Autoregulation of Cerebral Blood Flow
Robert L. Grubb, Jr., Milton J. Hernandez-Perez, Marcus E. Raichle, and Michael E. Phelps ...................... 155

Fibromuscular Dysplasia of the Posterior Cerebral Artery: Report of a Case and Review of the Literature
David B. Frens, Jack H. Petajan, Robert Anderson, and Harold J. DeBlanc, Jr. ..................................................... 161

Effects of Beta-Adrenergic Blockade on Cerebral Autoregulation and Chemical Vasomotor Control in Patients With Stroke

Cerebral Metabolic Changes During Treatment of Subacute Cerebral Infarction by Alpha and Beta-Adrenergic Blockade With Phenoxybenzamine and Propranolol
John Stirling Meyer, Shigemichi Okamoto, Kunio Shimazu, Atsuo Koto, Tadao Ohuchi, Atsuo Sari, and Arthur Dale Ericsson .... 180

Fluorescein Angiography in Microvascular Surgery: A Study Using the Rodent Artery
John L. Fox, and M. Gazi Yasargil ........................................ 196

Regional Cerebral Blood Flow in Patients With Hypertensive Intracerebral Hemorrhage
Hiroshi Kawakami, Takashi Kutsuzawa, Kazuo Uemura, Yoshiharu Sakurai, and Takashi Nakamura .............................. 207

Carotid Artery Occlusion Following Ingestion of LSD
Abraham N. Lieberman, William Bloom, Pulla S. Kishore, and Joseph P. Lin ............................................................. 213

Ineffectiveness of Dexamethasone for Treatment of Experimental Cerebral Infarction
Myoung C. Lee, Angeline R. Mastri, Arthur G. Waltz, and Ruth B. Loewenson .......................................................... 216

Oxygen Cycles and Metabolic Autoregulation
James H. Halsey, Jr., and Scott McFarland ................................ 219

Effect of Anoxia on Protein Metabolism in Subcellular Fractions of Rabbit Brain
Takehiko Yanagihara ........................................................ 226

The Effect of Graded Hypocapnia and Hypercapnia on Regional Cerebral Blood Flow and Cerebral Vessel Caliber in the Rhesus Monkey: Study of Cerebral Hemodynamics Following Subarachnoid Hemorrhage and Traumatic Internal Carotid Spasm

The Single Dye Passage. A New Technique for the Study of Cerebral Blood Flow Distribution
Rainer Weber, Masahiro Furuse, Mario Brock, and Hermann Dietz .... 247

Abstracts ........................................................................ 252

News from the American Heart Association .......................... 269

Report from the Joint Committee for Stroke Facilities —
XI. Transient Focal Cerebral Ischemia: Epidemiological and Clinical Aspects ......................................................... 275

(Continued)
CONTENTS OF VOLUME V

Abstracts from the Seminar "Platelets, Thrombosis and Inhibitors" held December 19-21, 1973, in Honolulu, Hawaii
Prepared by Paul Didisheim ........................................ 289

No. 3 (May-June)

Pathogenesis and Natural History of Transient Global Amnesia
Ninan T. Mathew, and John Stirling Meyer .......................... 303

Body Weight, Cerebral Atherosclerosis and Cerebral Vascular Disease: An Autopsy Study
A. C. Klassen, R. B. Loewenson, and J. A. Resch .................... 312

Pituitary Apoplexy: The Role of Atheromatous Emboli
Edward B. Sussman, and Robert S. Porro ............................. 318

The Influence of Nonrespiratory Alkalosis on Cerebral Blood Flow in Cats
J. L. Pannier, G. Demester, and I. Leusen ............................ 324

High Blood Viscosity Syndrome in Cerebral Infarction
Erwin O. Ott, Helmut Lechner, and Alberto Aranibar .................. 330

Segmental Middle Cerebral Artery Occlusion in Primates: An Experimental Method Requiring Minimal Surgery and Anesthesia
G. F. Molinari, J. I. Moseley, and J. P. Laurent ....................... 334

Cerebral Protection During Carotid Endarterectomy
James R. Howe, and Glenn W. Kindt .................................. 340

The Effect of Carbon Dioxide Inhalation on Cerebral Blood Flow: A Two-Hour Duration Study in Dogs With Microspheres
Richard T. Jackson, Albert A. Clairmont, and Richard A. Pollock ........ 344

Thromboelastographic Studies in Cerebral Infarction
M. G. Ettinger ......................................................... 350

The Distribution and Density of Reduced Cerebral Blood Flow Following Acute Middle Cerebral Artery Occlusion: An Experimental Study by the Technique of Hydrogen Clearance in Baboons
L. Symon, E. Pasztor, and N. M. Branston .............................. 355

Surgical Decompression for Cerebral and Cerebellar Infarcts
Henrique S. Ivamoto, Mitsuo Numoto, and R. M. Peardon Donaghy ........ 365

Measurement of Regional Cerebral Blood Flow With 133Xenon and a Multiple-Crystal Scintillation Camera
P. J. Cannon, R. R. Sciacca, J. C. M. Brust, P. M. Johnson, and S. K. Hilal ....... 371

Cardiac Abnormalities in Subarachnoid Hemorrhage: A Resume
Bernard M. Weintraub, and Lawrence C. McHenry, Jr. .................. 384

Family Stroke Education
Roe Wells ............................................................. 393

Effects of Catecholamine Infusions on Cerebral Blood Flow and Oxygen Consumption of the Isolated Perfused Dog Brain
R. Zimmer, R. Lang, and G. Oberdörster .............................. 397

Abstracts .............................................................. 406

News from the American Heart Association .......................... 420

No. 4 (July-August)

EDITORIAL

The Importance and Relevance of Studies of the Pial Microcirculation
William J. Rosenblum, and Hermes A. Kontos ........................ 425

(Continued)
CONTENTS OF VOLUME V

SPECIAL ARTICLE

Summary of the Ninth Princeton Conference on Cerebral Vascular Diseases, January 9-11, 1974
Prepared by C. H. Millikan .................................................. 429

Glycerol Therapy of Experimental Cerebral Microembolism
Dennis M. Welch, Rebecca K. Studer, and Barry A. Siegel .................. 439

Effect of Methylprednisolone on Experimental Cerebral Infarction in the Mongolian Gerbil
C. Patrick McGraw, D. Frank Fleming, Jr., and James H. Spruiil ........... 444

Adrenergic Mechanisms in Cerebral Blood Vessels: Effect of Tyramine on the Isolated Middle Cerebral Artery of the Goat
Pedro R. Urquilla, Emilio J. Marco, Gloria Balfagon, and Salvador Lluch . 447

Personality Patterns and Life Stress in Ischemic Cerebrovascular Disease. 1. Psychiatric Findings

Dynamics and Control Mechanisms in Maintenance of Regional Cerebral Blood Flow
Yuri E. Moskalenko, Ivan T. Demchenko, Alexander I. Krivchenko, and Inna P. Fedulova ................................................. 461

Synaptic Alterations in Developing Cortical Infarction: An Experimental Investigation in Monkeys
John R. Little, Frederick W. L. Kerr, and Thoralf M. Sundt, Jr. ............ 470

Acute Canine Cerebral Ischemia: A Preliminary Model to Evaluate Microvascular Mammary-Carotid Anastomosis
Carroll P. Osgood, Manuel Dujovny, and Howard Wisotzkey ................ 477

Cigarette Smoking and Strokes
Abraham Nomura, George W. Comstock, Lewis Kuller, and James A. Tonascia ................................................................. 483

Ultrastructural Alterations in the Dog Brain After Profound Hypothermia Induced by Extracorporeal Circuit
James H. Harris, and James T. Robertson ........................................ 487

Sturge-Weber Disease With Subarachnoid Hemorrhage
Frank H. Anderson, and Gary W. Duncan ...................................... 509

Total Cerebral Blood Flow in the Monkey Measured by Hydrogen Clearance
Albert N. Martins, Arthur I. Kobrine, Thomas F. Doyle, and Archimedes Ramirez ................................................................. 512

The Mechanics of Breathing and Stabilization of Ventilation in Patients With Unilateral Cerebral Infarction
Samuel M. McMahon, and Albert Heyman ...................................... 518

Letters to the Editor ................................................................. 528

Abstracts ............................................................................... 529

News from the American Heart Association ....................................... 547

Cooperative Study of Intracranial Aneurysms and Subarachnoid Hemorrhage. Report on a Randomized Treatment Study
I. Introduction ........................................................................ 550
II. Objectives and Design of Randomized Aneurysm Study ............... 552
III. Intracranial Surgery ............................................................ 557

No. 5 (September-October)

Headache and Transient Ischemic Attacks
Alan B. Grindal, and James F. Toole ............................................ 603

(Continued)
## CONTENTS OF VOLUME V

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compartments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory Pattern Disturbances in Ischemic Cerebral Vascular</td>
<td>M. C. Lee, A. C. Klassen, and J. A. Resch</td>
<td>612</td>
</tr>
<tr>
<td>Disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effects of Dexamethasone on Distributions of Water and Pertechet-</td>
<td>Wayne E. Hoppe, Arthur G. Waltz, Margaret M. Jordan, and Ronald L. Jacobson</td>
<td>617</td>
</tr>
<tr>
<td>netate in Brains of Cats After Middle Cerebral Artery Occlusion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early Rehabilitative Care in Community Hospitals: Effect on Quality</td>
<td>B. Lionel Truscott, Claire M. Kretschmann, James F. Toole, and Thomas F. Pajak</td>
<td>623</td>
</tr>
<tr>
<td>of Survivorship Following a Stroke</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Effects of Changes in Paco₂ on Cerebral Blood Volume, Blood</td>
<td>Robert L. Grubb, Jr., Marcus E. Raichle, John O. Eichling, and Michel M. Ter-Pogossian</td>
<td>630</td>
</tr>
<tr>
<td>Flow, and Vascular Mean Transit Time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertebral Artery Occlusion Following Hyperextension and Rotation of</td>
<td>S. Okawara, and D. Nibbelink</td>
<td>640</td>
</tr>
<tr>
<td>the Head</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amaurosis Fugax: Diagnostic and Therapeutic Aspects</td>
<td>H. Hooshmand, F. S. Vines, H. M. Lee, and A. Grindal</td>
<td>643</td>
</tr>
<tr>
<td>Bilateral Reduction of Hemispheric Blood Flow in Patients With</td>
<td>Masatoshi Fujishima, Kenjiro Tanaka, Yo Takeya, and Teruo Omae</td>
<td>648</td>
</tr>
<tr>
<td>Unilateral Cerebral Infarction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tube Feeding and Lethal Aspiration in Neurological Patients: A Review</td>
<td>Ladislaio Olivares, Alberto Segovia, and Rogelio Revuelta</td>
<td>654</td>
</tr>
<tr>
<td>of 720 Autopsy Cases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incidence and Early Prognosis of Stroke in Espoo-Kauniainen Area,</td>
<td>Kari Aho, and Rainer Fogelholm</td>
<td>658</td>
</tr>
<tr>
<td>Finland, in 1972</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abstracts</td>
<td></td>
<td>662</td>
</tr>
<tr>
<td>News from the American Heart Association</td>
<td></td>
<td>675</td>
</tr>
<tr>
<td>Role of Lipids in the Development of Brain Infarction: The Framingham</td>
<td>William B. Kannel, Tavia Gordon, and Thomas R. Dawber</td>
<td>679</td>
</tr>
<tr>
<td>Study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Method for Serial Measurement of Regional Cortical Metabolism</td>
<td>Frederick A. Simeone, Glenn Frazer, Phillip Vinall, and Richard Bernstein</td>
<td>686</td>
</tr>
<tr>
<td>and Blood Flow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cerebral Autoregulation in Man</td>
<td>Lawrence C. McHenry, Jr., James W. West, Edward S. Cooper, Herbert I. Goldberg, and Marvin E. Jaffe</td>
<td>695</td>
</tr>
<tr>
<td>To-and-Fro Movement and External Escape of Carotid Arterial Blood</td>
<td>Shotaro Yoned a, Akifumi Nishimoto, Tadaatsu Nukada, Yoshihiro Kuriyama, Kikushi Katsurada, and Hiroshi Abe</td>
<td>707</td>
</tr>
<tr>
<td>in Brain Death Cases. A Doppler Ultrasonic Study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asymptomatic Occlusion of an Internal Carotid Artery in a Hospital</td>
<td>Mark L. Dyken, J. Frederick Doepker, Jr., Richard Kiovsky, and Robert L. Campbell</td>
<td>714</td>
</tr>
<tr>
<td>Population: Determined by Directional Doppler Ophthalmosonometry</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Continued)
Interrelationships Among Regional Cerebral Blood Flow, Mean Transit Time, Vascular Volume and Cerebral Vascular Resistance
Yoshihiro Kuriyama, Takashi Aoyama, Kunihiko Tada, Shotaro Yoneda, Tadaatsu Nukada, and Hiroshi Abe 719

Neurovascular Complications of Dialysis and Transplantation
Robert D. Harris, J. Keith Campbell, Frank M. Howard, John E. Woods, Carl F. Anderson, and George P. Sayre 725

Hypotension-Induced Changes in Cerebral Function During Cardiac Surgery
James J. Stockard, Reginald G. Bickford, Robert R. Myers, Maung H. Aung, Ralph B. Dilley, and James F. Schauble 730

Neurogenic Control of Cerebral Blood Flow in the Baboon. Effects of Alpha Adrenergic Blockade With Phenoxybenzamine on Cerebral Autoregulation and Vasomotor Reactivity to Changes in Paco2
Yasuo Kawamura, John Stirling Meyer, Hideharu Hiromoto, Minoru Aoyagi, and Kazuo Hashi 747

Myocardial Damage and Cardiac Arrhythmias After Intracranial Hemorrhage. A Critical Review
D. J. Weidler 759

Scanning Electron Microscopic Observations on the Luminal Surface of the Rabbit Common Carotid Artery Subjected to Ischemia by Arterial Occlusion

The Effect of Acute Stroke on Cardiac Functions as Observed in an Intensive Stroke Care Unit
Sylvan Lavy, Israel Yaar, Eldad Melamed, and Shlomo Stern 775

Abstracts 781

An Appreciation 798

News from the American Heart Association 799

Volume Author Index 801

Volume Subject Index 803