# Stroke
## A Journal of Cerebral Circulation
### VOLUME 10
#### January-December 1979

<table>
<thead>
<tr>
<th>No. 1 (January-February)</th>
<th>No. 2 (March-April)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EDITORIAL:</strong> Stroke Rehabilitation: Effectiveness, Benefits and Cost. Some Practical Considerations</td>
<td><strong>Summary of Ninth International Salzburg Conference on Cerebrovascular Disease, Salzburg, Austria, September 27–30, 1978</strong></td>
</tr>
<tr>
<td>Joel S. Feigenson</td>
<td>John Stirling Meyer and William Hass</td>
</tr>
<tr>
<td>The Disability Oriented Rehabilitation Unit — A Major Factor Influencing Stroke Outcome</td>
<td>Comparative Risk of Operation and Expectant Management for Carotid Artery Disease</td>
</tr>
<tr>
<td>Joel S. Feigenson, Howard S. Glitlow, and Susan D. Greenberg</td>
<td>Hugh West, Robert Burton, Anthony J. Roon, James M. Malone, Jerry Goldstone, and Wesley S. Moore</td>
</tr>
<tr>
<td>Ischemic Brain Edema: Comparative Effects of Barbiturates and Hypothermia</td>
<td>Improved Results of Carotid Endarterectomy in Patients with Symptomatic Coronary Disease: An Analysis of 1,546 Consecutive Carotid Operations</td>
</tr>
<tr>
<td>Frederick A. Simeone, Glen Frazer, and Pablo Lawner</td>
<td>Coyness L. Ennis, Jr., Gerald M. Lawrie, George C. Morris, Jr., E. Stanley Crawford, Jimmy F. Howell, Michael J. Reardon, and Stephen C. Weatherford</td>
</tr>
<tr>
<td>Effect of Dextran on Cerebral Function and Blood Flow after Cardiac Arrest. An Experimental Study on the Dog</td>
<td>Protection from Cerebral Ischemia by a New Imidazole Derivative (Y-9179) and Pentobarbital. A Comparative Study in Chronic Middle Cerebral Artery Occlusion in Cats</td>
</tr>
<tr>
<td>Shu-Ren Lin, Michael J. O'Connor, Adrian King, Phillip Harthn, and Harry W. Fücher</td>
<td>Akira Tamura, Takao Azano, Keiji Sano, Tatsumi Tsumagari, and Akira Nakajima</td>
</tr>
<tr>
<td>Cerebral Oxygen Consumption and Blood Flow in Hypoxia: Influence of Sympathoadrenal Activation</td>
<td>Failure of Thiopental to Modify Global Anoxic Injury</td>
</tr>
<tr>
<td>Leif Berntman, Christen Carlsson, and Bo K. Stieβ</td>
<td>Bruce D. Snyder, Manuel Ramirez-Lassepas, Pradub Sukhum, Dolores Fryd, and Joo Ho Sung</td>
</tr>
<tr>
<td>Intravenous Nitroglycerin in Experimental Cerebral Vasospasm. A Preliminary Report</td>
<td>Physostigmine-Induced Cerebral Protection Against Hypoxia</td>
</tr>
<tr>
<td>Serial Measurement of Cerebral Blood Flow Using External Counting of Microspheres</td>
<td>(Continued)</td>
</tr>
</tbody>
</table>
| T. A. McCalden | }
CONTENTS OF VOLUME X

Cervical Carotid Aneurysm Presenting As Recurrent Cerebral Ischemia with Head Turning ....................................................... 144
Roger W. Countee, T. Vijayanathan, and Carl Barrese

Neurologic and Cardiovascular Effects of Hypotension in the Monkey .................................................. 147
Dennis J. Selkoe and Ronald E. Myers

Extracorporeal Glass-Wool Filtration of Whole Blood Enhances Post-Ischemic Recovery of the Cortical Sensory Evoked Response .................. 158

Effect of Experimental Ischemia on Neurotransmitter Amines in the Cerbil Brain ........................................ 165
M. J. G. Harrison, C. D. Marsden, and P. Jenner

Serum Dopamine-B-Hydroxylase Activity in Acute Stroke ..................... 168
Tadashi Kanda, Fumio Gotoh, Masahiro Yamamoto, Fumihiko Sakai, Tsuneyuki Takeoka, and Yasuyuki Takagi

Intracranial Saccular Aneurysm and Moyamoya Disease .................................................. 174
Harold P. Adams, Jr., Neal F. Kassell, Hugh S. Wisoff, and Charles G. Drake

Adrenergic Control of Cerebral Blood Flow and Energy Metabolism in the Rat .................................................. 179
Kyuya Kogure, Peritz Scheinberg, Hitoshi Kishikawa, Yoichi Utsunomiya, and Raul Busuttil

Ischemic Brain Edema Following Middle Cerebral Artery Occlusion in Baboons: Relationship Between Regional Cerebral Water Content and Blood Flow at 1 to 2 Hours ......... 184
Lindsay Symon, Neil M. Bra震动, and Oleg Chikovani

Platelet Thrombi in Experimental Cerebral Infarction .......... 192
Carol K. Peitso

Influence of Sex on Cerebral Ischemia Following Bilateral Carotid Occlusion in Spontaneously Hypertensive Rats: A Metabolic Study .................. 196
Yasuo Nakatomi, Masatoshi Fujishima, Kinya Tamaki, Takao Ishitsuka, Jun Ogata, and Teruo Omae

Stroke-Associated Deaths in Washington County, Maryland, with Special Reference to Water Hardness .................. 199
G. W. Comstock, G. M. Cauthen, K. J. Helsinger, and E. L. Goldberg

B. O. Otsuki, O. Bademosi, O. O. Akinkugbe, A. B. O. Oyediran, and R. Carlisle

BRIEF COMMUNICATION: Gastrointestinal Complication of High-Dose Corticosteroid Therapy in Acute Cerebrovascular Patients .......................... 208
Gian Andrea Ottonello and Alberto Primavera

CURRENT CONCEPTS OF CEREBROVASCULAR DISEASE-STROKE Clinical Relevance of Models of Cerebral Ischemia .................. 211
Arthur G. Waltz

LETTERS TO THE EDITOR: Operative Results Corrected For Carotid Endarterectomy ........................................ 214
Jesse E. Thompson

Hemorrhage Complication in Carotid Endarterectomy .................. 219
Martin E. Bueteman

Abstracts of Literature ........................................ 220

News from the American Heart Association ........................................ 224

No. 3 (May-June)

EDITORIAL: Stroke Intensive Care Units. Objectives and Results .................. 235
Clark H. Millikan

The Carotid Bifurcation Plaque: Pathologic Findings Associated with Cerebral Ischemia .................. 238
Anthony M. Imparato, Thomas S. Riles, and Frederick Gorstein

Scanning Electron Microscopic Study of Endothelial Cells of Cerebral Arteries from Spontaneously Hypertensive Rats ............. 245
Fumihada Hazama, Takashi Ozaki and Shigeru Amano

The Electrocardiogram in Stroke: Relationship to Pathophysiological Type and Comparison with Prior Tracings ............. 253
David S. Goldstein

Transient Ischemic Attacks. Retrospective Study of 150 Cases of Ischemic Infarct in the Territory of the Middle Cerebral Artery .................................................. 259
J. L. Marti-Villalta, S. Lopez-Pouw, J. M. Grau, and L. Barraquer

Hypertension and Acute Focal Cerebral Ischemia, Infarction and Edema after Occlusion of a Middle Cerebral Artery in Cats .................. 263
Toru Hayakawa, Arthur G. Waltz, and Ronald L. Jacobson

A New Model of Bilateral Hemispheric Ischemia in the Unanesthetized Rat .................................................. 267
William A. Pulsinelli and James B. Brierley

Survival of Rabbits After Prolonged Cerebral Ischemia .................. 272
Ronald J. Kolata

Oclusion of the Vertebral or Basilar Artery. Follow Up Analysis of Some Patients with Benign Outcome .................. 277
Louis R. Caplan

Brain Hemorrhage from Intracranial Tumor .......................... 283
John R. Lister, Burke Dial, Garry Belanger and Stirling Carpenter

Effect of Altered Availability of Energy-Yielding Substrates Upon Survival from Hypoxia in Mice .................. 288
Jeffrey R. Kirsch and Louis G. D'Alecy

(Continued)
CONTENTS OF VOLUME X

EEG Monitoring for Induced Hypotension for Surgery of Intracranial Aneurysms 292

Dissecting Aneurysms of the Basilar Artery in 2 Patients 294
C. Bruce Alexander, Peter C. Burger, and John A. Goree

Isoproterenol Treatment of Visual Symptoms in Migraine 299
Mark J. Kupersmith, William K. Hass, and Norman E. Chase

Synthesis of Prostaglandins and Thromboxane B, by Cerebral Arteries 306
A. Ainsworth Hagen, Richard P. White and James T. Robertson

133Xe Inhalation Method for Measuring Cerebral Blood Flow in Conscious Baboons 310
Fumihiko Sakai, John Stirling Meyer, Fumie Yamaguchi, Masahiro Yamamoto, and Terry Shaw

Role of Catecholamine Degradative Enzymes and the Adrenergic Innervation in Determining the Cerebrovascular Response to Infused Norepinephrine 319

Role of Adrenergic Nerves in Blood-Induced Cerebral Vasospasm 375
Frederick A. Simeone, Phillip E. Vinall, J. L. Alderman, and John D. Irvin

Results of Electroencephalographic Monitoring During 367 Carotid Endarterectomies. Use of a Dedicated Minicomputer 381
Keith H. Chiappa, Stephanie R. Burke, and Robert R. Young

Autopsy Study of Cerebrovascular Disease in Japanese Men Who Lived in Hiroshima, Japan, and Honolulu, Hawaii 389
Yoshio Mitsuyma, Lawrence R. Thompson, Takuji Hayashi, Kelvin K. Lee, Robert J. Keehn, Joseph A. Resch, and Arthur Steer

Ineffectiveness of the Doppler Ophthalmic Test (DOT) in Post-Endarterectomy Evaluation 396
Shirley M. Ots, Richard A. Smith, Donald J. Dalesio, Alan D. Kroll, Michael Rush, and Ralph B. Dilley

Topical Prostaglycerin (PGI2) Inhibits Platelet Aggregation in Pial Venules of the Mouse 399
William I. Rosenblum and Farouk El-Sabban

Fluctuation of Lipid Peroxides and Related Enzyme Activities at Time of Stroke in Stroke-Prone Spontaneously Hypertensive Rats 323
Isao Tomita, Mitsuki Sano, Shigeo Serizawa, Kunio Ohta, and Masaru Katou

Quantitation of Carotid Stenosis with Continuous-Wave (C-W) Doppler Ultrasound 326
Merrill P. Spencer and John M. Reid

Changes in Internal Carotid Artery Flow Velocities with Cerebral Vasodilation and Constriction 331
Martin G. Bentley, Joseph N. Blau, and Raymond G. Gosling

Flow Disturbances at the Apex and Lateral Angles of a Variety of Bifurcation Models and Their Role in Development and Manifestations of Arterial Disease 335
Alasdair D. Malcolm and Margot R. Roach

CURRENT CONCEPTS OF CEREBRO-VASCULAR DISEASE-STROKE Intracranial Bypass Surgery for Cerebral Arterial Disease and the Responsibility of the Practicing Physician 344
Oscar M. Reinmuth

LETTERS TO THE EDITOR: Doppler Ophthalmosonometry 348
Raymond N. Engelder, Robert D. Schoumaker

Abstracts of Literature 349

Erratum 367

News from the American Heart Association ... 368

No. 4 (July-August)

Effect of Phenoxbenzamine on Cerebral Blood Flow and Metabolism in the Baboon During Hemorrhagic Shock 401
János Hamar, Arístid G. G. Kovách, Martin Reivich, István Nyáry, and Felix Duris

Modification of Cerebrovascular CO2 Reactivity by Inhibition of Dopamine β-Hydroxylase 407

Cerebral Artery Thrombosis and Intramural Hemorrhage 411
Seizo Sadoshima, Takeo Fukushima, and Kenzo Tanaka

A New Canine Model of Proximal Internal Carotid Embolism 415
Howard H. Kaufman, James H. Anderson, John D. Huchton, and Jannie Woo

A Simplified Method of Measuring Regional Blood Flow 419
Adelbert Ames III and Edwin G. Fischer

Cerebral Blood Flow Immediately Following Brief Circulatory Stasis 423
Edwin G, Fischer, Adelbert Ames III and Antonio V. Lorenzo

Critical Appraisal of Cerebral Blood Flow Measured from Brain Stem and Cerebellar Regions After 133Xe Inhalation in Humans 428
Oliver Jude, John S. Meyer, Fumihiko Sakai, Fumie Yamaguchi, Masahiro Yamamoto and Terry Shaw

(Continued)
CONTENTS OF VOLUME X

Recovery of Brain Mitochondrial Function in the Rat after Complete and Incomplete Cerebral Ischemia .................................................. 437
Stig Rehncrona, Leena Mela, and Bo K. Siesjö

Treatment of Acute Focal Ischemia with Continuous CSF Drainage and Mannitol ........ 446
John R. Little and Donald O'Shaughnessy

External Carotid Artery in Internal Carotid Artery Occlusion. Angiographic, Therapeutic, and Prognostic Considerations ...... 450
Roger W. Countee and Thurairasah Vijayanathan

Reversed Ophthalmic Artery Flow in Internal Carotid Artery Occlusion. A Re-Appraisal Based on Ultrasonic Doppler Investigations 461
Vida Hodek-Demarin and Hans R. Müller

Circulating Platelet Aggregates in Sickle Cell Disease Patients with and without Vasocclusion .............................................. 464
Paulette Mehta and Jawahar Mehta

James F. Toole and Ralph W. Barnes

PRELIMINARY COMMUNICATION: Omental Transposition to Brain of Stroke Patients .................................................. 471

BRIEF COMMUNICATION: Brain Stem Dysfunction in Transient Global Amnesia 473
N.S. Longrider, V. Hachinski, and H.O. Barber

CURRENT CONCEPTS OF CEREBRO-VASCULAR DISEASE-STROKE Treatment of Aphasia Following Stroke .............. 475
Audrey L. Holland

LETTERS TO THE EDITOR: Trifluoperazine Pretreatment in Experimental CI Gerbils 478
John C. Sowers, C. Patrick McGraw

Non-Invasive Methods Defended as Valuable Merrill P. Spencer, Burton A. Sandok

Question of Methodology With Labelled Microspheres .............................................. 480
David L. Jackson, Shu-Ren Lin

Abstracts of the Cerebrovascular Clinical Research Center Workshop. February 7–8, 1979, Phoenix, AZ .............................................. 482
Abstracts of Literature ........................................................................................................ 496

News from the American Heart Association ........ 515

No. 5 (September-October)

Tranexamic Acid in Subarachnoid Hemorrhage. A Double-Blind Study ...................... 519
Markku Kaste and Magnus Ramsay

Detrimental Effect of Prolonged Hypothermia in Cats and Monkeys With and Without Regional Cerebral Ischemia ..................... 522
Peter A. Steen, Edward H. Soule, and John D. Michenfelder

Prognosis in Patients With Infarction and TIA in Carotid Territory During and After Anticoagulant Therapy .......... 529
Hans Link, Gustaf Lebram, Ingegerd Johansson, and Claes Rödborg

Frequency of Focal Cerebral Transient Ischemic Attacks During a 12 Month Period. The Copenhagen City Heart Study ........ 533
Gudrun Bøyesen, Gorm Jensen, and Peter Schnohr

Effect of Intravenous Ethanol on Cerebral Vasospasm Produced by Subarachnoid Blood ............................................................ 535
Kevin J. Barry and R. Michael Scott

Small Animal Model for Investigation of Subarachnoid Hemorrhage and Cerebral Vasospasm ...................................................... 538
Kevin J. Barry, Michael A. Gogjian, and Bennett M. Stein

Brain Edema During Ischemia and After Restoration of Blood Flow. Measurement of Water, Sodium, Potassium Content and Plasma Protein Permeability ........ 542
U. Ito, K. Ohno, R. Nakamura, F. Suyanuma, and Y. Inaba

Serum Cardiac Enzymes in Stroke .................................................. 548
J. W. Norris, V. C. Hachinski, M. G. Myers, J. Callow, T. Wong, and R. W. Moore

Brain Blood Flow and Metabolism After Global Ischemia and Post-insult Thiopental Therapy in Monkeys ............................ 554

Body Fluid Oxygen Tension and Prognosis in Patients with Ruptured Aneurysm ............................ 560
Hidemi Kishikawa, Kiyoshi Iwatsuki, Syunichiro Fujimoto, and Akitsama Umeda

Chronic Subdural Hematoma Presenting as Transient Neurologic Deficits ................. 564
Joseph E. Welsh, George W. Tyson, H. Richard Wian, and John A. Jane

Brain Metabolism Following Bilateral Carotid Occlusion in 2 Different Models of Experimental Hypertensive Rats .................. 568
Masatoshi Fujishima, Yasuyuki Moroizumi, Keshi Kumamoto, Yasuhiro Noda, Jun Ogata, and Terao Ome

Cerebral Vasomotor Reactivity in Normotensive and Spontaneously Hypertensive Rats ........ 572
Barbro B. Johansson and Bengt Nilsson

pH Dependence of Blood-Brain Barrier Permeability to Lactate and Nicotine ............... 577
William Oldendorf, Leon Braun, and Eain Cornford

Arterial Air Embolism in the Cat Brain ............................................. 581
H. Fritz and K.-A. Hossmann

(Continued)
CONTENTS OF VOLUME X

Platelet Coagulant Activities in Arterial Occlusive Disease of the Eye ........................................... 589
    Peter N. Walsh, Tulay Kansu, Peter J. Savino, Norman J. Schatz, Larry E. Magargal, Richard E. Goldberg, and James J. Corbett

Cerebral Arteritis in Scleroderma ..................................................... 595
    Elihu Estev, Abraham Lieberman, Richard Pinto, Martin Meltzer, and Joseph Ransohoff

CASE REPORT: Fusiform Basilar Aneurysm Simulating Carotid Transient Ischemic Attacks .......................... 598
    Leonard F. Hirsh and Carlos F. Gonzalez

CURRENT CONCEPTS OF CEREBROVASCULAR DISEASE-STROKE: Assessment of the Role of Antiplatelet Aggregating Agents in Transient Ischemic Attacks, Stroke and Death ........................................... 602
    Mark L. Dyken

Abstracts of Literature ................................................................. 605

News from the American Heart Association ......................... 623A

No. 6 (November-December)

Ischemic Cerebral Edema. A Review ............................................. 623
    M. D. O'Brien

Prostaglandin I, and Indomethacin Prevent Impairment of Post-Ischemic Brain Reperfusion in the Dog ............ 629
    John M. Hallenbeck and Thomas W. Furlow, Jr.

Prevention of Experimental Subarachnoid Hemorrhage-Induced Intracranial Arterial Vasoconstriction with Phosphodiesterase Inhibitor Phthalazinol (EG-626) ............................................. 638
    John F. Alksne and P. Josephine Branson

Attenuation of Ischemic Brain Edema by Pentobarbital after Carotid Ligation in the Gerbil ............................ 644
    Pablo Lawner, John Laurent, Frederick Simeone, Eugene Fink, and Elliot Rubin

Barbiturates in Focal Ischemia of Primate Cortex: Effects on Blood Flow Distribution, Evoked Potential and Extracellular Potassium ................................................................. 647
    Neil M. Branson, Terence Hope, and Lindsay Symon

Influence of Various Agents on the Development of Brain Edema in the Rat Following Microembolism. Protective Effect of Gamma-Butyrolactone .................................................. 653
    Jean Bralet, Paullette Beley, Anne-Marie Bralet, and Alain Beley

Changing Pattern of Cerebral Infarction: 1945-1974 ................................................................. 657

Recovery in Treated Aphasia in the First Year Post-Stroke ................................................................. 663
    Martha Taylor Sarno and Eric Levisa

Massive Doses of Steroids in Cryogenic Cerebral Injury and Edema .................................................... 670
    Raymond A. Claesen, Sylvia Pandolfi, and Jaclynn R. Clasen

Histopathological Reactivity of Carotid Arteries of Normotensive Sprague-Dawley vs Sпонtaneously Hypertensive Rats to Ligation Injury .................................................... 674
    Bernard C. Wexler

Levels in Stroke Patients of CFS Astroprotein, and Astrocyte-Specific Cerebroprotein .................. 685
    Tora Hayakawa, Yutaka Ushio,Takeo Mori, Norio Arita, Toshiki Yoshimine, Yasutaka Maeda, Keiji Shirizu, and Akio Myoga

Measurement of Regional Brain Glucose Utilization In Vivo Using [2-14C] Glucose ................................. 690
    Richard Hawkins, William K. Hass, and Joseph Ransohoff

Experimental Cerebral Vasospasm after Subarachnoid Hemorrhage. Participation of Adrenergic Nerves in Cerebral Vessel Wall 703
    Shunro Endo and Jiro Suzuki

Effects of Hemorrhagic Hypotension on the Cerebral Circulation. I. Cerebral Blood Flow and Pial Arteriolar Caliber ................................................................. 711

Effects of Hemorrhagic Hypotension on the Cerebral Circulation. II. Electro cortical Function .......... 719

Effects of Hemorrhagic Hypotension on the Cerebral Circulation III. Neuropathology .................. 724

Correlated Electrical and Mechanical Responses of Isolated Rabbit Pial Arteries to Some Vasoactive Drugs ................................................................. 727
    N.A.T. Lusinivkou, R. Sercombe, P. Aubineau, and J. Seylaz

Intracranial Venous Thrombosis in Young Women ..................... 680
    Bruno Estanol, Alejandro Rodriguez, Guillermo Conte, Jose Manuel Aleman, Mauro Lojo, and Javier Pizzuto

(Continued)
## CONTENTS OF VOLUME X

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect of Phenobarbital on Cerebral Energy State and Metabolism. Enzymatic Activities</td>
<td>733</td>
</tr>
<tr>
<td>G. Banti, A. Agnoli, F. Dagani, S. Ruggieri, and R.F. Villa</td>
<td></td>
</tr>
<tr>
<td>Pharmacological Comparison of Isolated Human Cerebral and Digital Arteries</td>
<td>736</td>
</tr>
<tr>
<td>Gary A. Rose and Robert F. W. Moulds</td>
<td></td>
</tr>
<tr>
<td>Erratum</td>
<td>741</td>
</tr>
<tr>
<td>An Appreciation</td>
<td>742</td>
</tr>
<tr>
<td>LETTERS TO THE EDITOR: Death in Early Stroke, Causes and Mechanisms</td>
<td>743</td>
</tr>
<tr>
<td>O. B. White, J. W. Norris, V. C. Hachinski and A. Lewis</td>
<td></td>
</tr>
<tr>
<td>Abstracts of Literature</td>
<td>744</td>
</tr>
<tr>
<td>News from American Heart Association</td>
<td>762A</td>
</tr>
<tr>
<td>Volume Author Index</td>
<td>767</td>
</tr>
<tr>
<td>Volume Subject Index</td>
<td>770</td>
</tr>
</tbody>
</table>