STROKE
JANUARY-DECEMBER, 1973

SUBJECT INDEX
Page Numbers in Italics refer to Abstracts

A
Acetylsalicylic acid
effect of aspirin on thrombosis, 387
TIA associated with antiplatelet aggregation therapy, 732
Acid-base changes
cerebral effects on cerebral circulation, 50
cerebral sympathetic vasoconstriction blocked by adrenergic alpha receptor antagonists, 30
Amaurosis fugax
indicators of extracranial carotid artery disease, 537
AMP inhibition
of reaction of ADP with washed platelets, 93
Amyloidosis
ereditary cerebral hemorrhage with, 103
Anatomy
middle cerebral artery, 412
Anesthesics
effect of anesthetic depth on cerebral venous oxygen concentration, 558
Anceursoms
of anterior communicating artery complex, 819
arteriovenous aneurysm formation in saphenous vein-graft, 827
cannulation of jugular bulb, 955
carotid artery
bilateral giant aneurysms of internal, 260
with rupture into the oropharynx, 256
cerebral
bypass anomaly of vertebral artery associated with arteriovenous malformations and, 96
in children, 997, 1016
cervical internal carotid artery, 260
in children, 879
of common carotid artery, 719
congenital
of extracranial carotid arteries, 487
of extracranial carotid artery, 488
TIA's and stroke due to, 254
familial
and infundibular widening, 258
familial occurrence of multiple, 253
papilloedema associated with ruptured, 871
progress in magnetically controlled stereotactic thrombosis of, 822
and retinal hemorrhage, 105
ruptured: contrast agent extravasation, 242
treatment of multiple arterial, 991
warning signs prior to rupture, 990
intracranial
angiographic investigations, 241
clip-grafts for small vessel surgery and, 701
disturbances of serum electrolytes after surgery, 96
electronic radiography in stereotactic thrombosis of, 241
factors disposing to morbidity in surgery, 990
familial, 487, 716
familial occurrence of multiple, 253
papilloedema associated with ruptured, 817
progress in magnetically controlled stereotactic thrombosis of, 822
and retinal hemorrhage, 105
ruptured: contrast agent extravasation, 242
treatment of multiple arterial, 991
warning signs prior to rupture, 990
intracranial saccular
microsurgical treatment, 700
neurological status and angiographical evidence of, 997
physical factors in initiation, growth, and rupture of, 701
intraocular microscoopy, 246
left atrial myxoma, 451
massive brain hemorrhage, 946
myotic
neurological manifestations of infective endocarditis, 958
pathogenesis of, 827
phantom visualazation, 484
neurosurgical management in children, 1023
posttraumatic intracraniovenous: epistaxis with monoclonal
blindness preceded by chromatopsia, 101
ruptured mycotic pericallosal, with meningitis, 247
traumatic aneurysms in intracranial circulation, 999
traumatic cerebral, 826
treatment by stereotactic ferromagnetic silicone thrombosis, 718
vertebral and basilar arteries
posterior fossa approach to, 253
Angiography
in allergic women sensitive to contrast media, 259
artificial slow flow, with arteriovenous aneurysms in carotid arteries, 484
biplane magnification cerebral, 699
carotid, ventricular opacification during, 699
...
INDEX

1058

*thromboembolic complications during*, 89

*Antimigrain drugs*
effects on vascular responses, 104

*Antitrypsin*
fibrinogen concentration and immunoelectrophoresis in internal jugular vein, 807

*Aorta*
coartation of spinal cord complications following surgery for, 257
deposition of formed elements of blood on intima and signs of intimal injury, 244

*Aortitis syndrome*
follow-up observation of, 92

*Apical syndromes*
CBF and metabolism in complete apallic syndromes, 992

*prognostic value of CBF measurement*, 104

*Aphasia*
emotional state and awareness of speech defect in aphasic patients, 704

rapid amelioration of motor aphasia, 699

role of non-dominant hemisphere in restitution of speech in, 253

*Arterial grafts*
articular microautographs: experimental study, 828

*Arterial injury*
carotid TIA associated with antiplatelet aggregation therapy, 732

*Arterial occlusive disease*
neurosurgical management in children, 1022

See also *occlusive disease*

*Arterial peaks*

in regional cerebral blood flow, 133

Xenon clearance curves, 73

*Arteries*
noninvasive arteriography, 261

ultrasonic visualization of arterial lumen, 104

*Arteriography*
carotid

and EEG findings in TIA, 7

human brain. morphol differences in hemispheres, 102

small strokes in carotid territory associated with, 701

cerebral transit time of 99m technetium sodium pertechnetate, 996

intraoperative in carotid thromboendarterectomy, 991

noninvasive, 261

transaxillary selective four-vessel arteriography, 93

*Arteriosclerosis*

blood cloting and fibrinolysis in presence of arteriosclerotic obstruction in extremity arterial vessels, 92

experimental, evaluation of anatomicopathological findings, 96

relations between metabolic increase of plasma free fatty acids and occurrence of arteriosclerotic thromboarteritis in rabbits, 708

*Arteriovenous communications*
in human brain, 716

t*CBF determination by hydrogen clearance technique*, 904

*Arteriovenous malformations*
arterial peaks in regional cerebral blood flow, 73

of the brain, 489

long-term clinical study, 473

bypass anomaly of vertebral artery associated with cerebral aneurysms and, 96

cardiovascular dimensions in patients with intracranial AVM, 787

as cause of cardiac hypertrophy in adults, 710

in children, 843, 1016

diagnosis in children, 877

intracranial dural, 240

localization by ventriculography combined with stereoscopic arteriography, 814

neurosurgical management in children, 1023

percutaneous embolization, 1016

postmortem findings following embolization of, 472

radioisotopic study, 100

*Anticoagulant therapy*
laboratory control of simultaneous treatment with intravenous heparin and oral anticoagulants, 258

neurosurgical complications, 702

for senile dementia, 472

spontaneous spinal epidural haematoma, rare complication of, 86

*Anterior cerebral artery*
results of proximal occlusion for anterior communicating aneurysms, 83

*Antixemia*
effects of prolonged asphyxia and, on rat brain, 484

in vitro model for biochemical study, 409

ischemic anoxia and cerebral serotonin levels, 105

*Anoxia*
effects of prolonged asphyxia and, on rat brain, 484

in vitro model for biochemical study, 409

ischemic anoxia and cerebral serotonin levels, 105

*Anoxicemia*
effects of prolonged asphyxia and, on rat brain, 484

in vitro model for biochemical study, 409

ischemic anoxia and cerebral serotonin levels, 105

*Anorgiography-Arteriovenous malformation*

*Angiography-Arteriovenous malformation*

Animals
cats

histochemical studies in zone of ischemia following middle cerebral artery occlusion, 83

regional CBF during stimulation of seventh cranial nerve, 213

dogs

alpha blocked vasconstriction, 30

effects of blood gases on cerebral circulation, 65

induction of cerebral ischemia, 253

lactate in cerebrospinal fluid, 207

gerbilis

cerebral edema due to cerebral infarction in, 239

cerebral edema following carotid artery ligation, 988

disaggregation of polyribosomes in intact gerbilis following ischemia: ultrastructural study, 964

goats

effects of adrenergic drugs on cerebral circulation, 50

guinea pigs

effect of pH on metabolism and ultrastructure, 221

primates

effect of dexamethasone on edema of cerebral ischemia, 149

experimental studies of hyperemia phenomena in cerebral circulation of primates, 102

hydrogen clearance method as assessment of blood flow in cortex, white matter and deep nuclei, 536

neuropathology of systemic circulatory arrest, 99

raised intracranial pressure and CBF, 87

rabbits

increase in CBF by viquelid, 218

rats

alteration of course of hypertension in SHR, 91

cholinergic control of cortical blood flow, 232

increased binding of norepinephrine, 42

*Anoxia*
effects of prolonged asphyxia and, on rat brain, 484

in vitro model for biochemical study, 409

ischemic anoxia and cerebral serotonin levels, 105

*Anterior cerebral artery*
results of proximal occlusion for anterior communicating aneurysms, 83

*Anticoagulant therapy*
laboratory control of simultaneous treatment with intravenous heparin and oral anticoagulants, 258

neurosurgical complications, 702

for senile dementia, 472

spontaneous spinal epidural haematoma, rare complication of, 86

*Angiomas*
massive brain hemorrhage, 946

of nucleus caudateus head, 822

sequelae of surgical treatment, 822

of, nucleus caudateus head, 988

*Angioplasty*
effect on intracarotid, on regional cerebral blood flow, 99

plasma renin activity in acute CVD, 160

*Angiography*
clinical experience with circular, 482

Angiography-Arteriovenous malformation

*Angiography-Arteriovenous malformation*

*Angiography-Arteriovenous malformation*

in child with stroke, 1012

administration of fluids, 1012

angiographic equipment, 1013

complications, 1012

contrast media, 1012

indications, 1012

premedication, 1012

technique, 1012

children and adults with mental retardation, 489

complications of, 126

detecting carotid occlusive disease by thermography, 57

heparin coating of catheters against thromboembolism, 490

in patients with subarachnoid hemorrhage, 127

personnel for, 124

postangiographic care, 127

practical use of medium and slow-speed screens, 481

procedures and equipment, 123

prognosis in TIA, 666

systemic heparinization for, 260

verification of cerebral death, 258

Angiosomes

massive brain hemorrhage, 946

of nucleus caudateus head, 822

sequence of surgical treatment, 472

Angiotensin
effect on intracarotid, on regional cerebral blood flow, 99

plasma renin activity in acute CVD, 160

*Angiotensinogen*
effects of prolonged asphyxia and, on rat brain, 257

deposition of formed elements of blood on intima and signs of intimal injury, 244

*Aortitis syndrome*
follow-up observation of, 92

*Apical syndromes*

CBF and metabolism in complete apallic syndromes, 992

*prognostic value of CBF measurement*, 104

*Aphasia*
emotional state and awareness of speech defect in aphasic patients, 704

rapid amelioration of motor aphasia, 699

role of non-dominant hemisphere in restitution of speech in, 253

*Arterial grafts*

*Arterial injury*
carotid TIA associated with antiplatelet aggregation therapy, 732

*Arterial occlusive disease*

neurosurgical management in children, 1022

See also *occlusive disease*

*Arterial peaks*
in regional cerebral blood flow, 133

Xenon clearance curves, 73

*Arteries*
noninvasive arteriography, 261

ultrasonic visualization of arterial lumen, 104

*Arteriography*
carotid

and EEG findings in TIA, 7

human brain. morphol differences in hemispheres, 102

small strokes in carotid territory associated with, 701

cerebral transit time of 99m technetium sodium pertechnetate, 996

intraoperative in carotid thromboendarterectomy, 991

noninvasive, 261

transaxillary selective four-vessel arteriography, 93

*Arteriosclerosis*

blood cloting and fibrinolysis in presence of arteriosclerotic obstruction in extremity arterial vessels, 92

experimental, evaluation of anatomicopathological findings, 96

relations between metabolic increase of plasma free fatty acids and occurrence of arteriosclerotic thromboarteritis in rabbits, 708

*Arteriovenous communications*
in human brain, 716

t*CBF determination by hydrogen clearance technique*, 904

*Arteriovenous malformations*
arterial peaks in regional cerebral blood flow, 73

of the brain, 489

long-term clinical study, 473

bypass anomaly of vertebral artery associated with cerebral aneurysms and, 96

cardiovascular dimensions in patients with intracranial AVM, 787

as cause of cardiac hypertrophy in adults, 710

in children, 843, 1016

diagnosis in children, 877

intracranial dural, 240

localization by ventriculography combined with stereoscopic arteriography, 814

neurosurgical management in children, 1023

percutaneous embolization, 1016

postmortem findings following embolization of, 472

radioisotopic study, 100

Stroke, Vol. 4, November-December 1973
INDEX

[Arteriovenous malformation—Blood-brain barrier]

in cerebral perfusion pressure experiments, 325
CSF-aid base parameters and deep halothane hypotension, 324
cholinergic control of cortical blood flow, 232
correlation of regional cerebral blood volume with $P_{aCO_2}$
and arterial blood pressure, 325
during controlled hypotension, 324
effects of alpha adrenergic blockage, 187
effects of arterial blood pressure on rCBF, 390
effects of local increases of venous pressure on canine
cerebral hemodynamics, 323
effects of lowered cardiac output, 324
EEG and CBF measurements during surgery, 674
and hyperemia of CBF as evaluated by thermal diffusion, 917
impaired neurogenic CV control and dysautoregulation
after stroke, 169
lactate in cerebrospinal fluid, 207
cerebral hemodynamics, 323
of ocular blood flow, 707
physiological responses of cerebral circulation, 632
regional cerebrovascular CO$_2$ reactivity, blood pressure,
and regional resting flow, 725
vascular mechanisms controlling constant blood supply to
brain, 742

Axillary arteries
complications of arteriotomies, 91
transaxillary selective four-vessel arteriography, 93

Axillary-axillary bypass
hemodynamics of, 489

B

Bacterial endocarditis
in heroin addicts, 484
neurological manifestations of infective endocarditis, 958

Barbiturates
protection against cerebral infarction, 358

Baroreceptor reflexes
central nervous system control of, 472
participation of central nonadrenergic neurons in arterial, 474

Basal ganglia
rCBF during stimulation of seventh cranial nerve, 213

Basilar artery
localized neurogenic vasconstriction of, 760
modification of spasmy in inhibition of platelet function, 988
occlusion of, in young patients, 258
prognosis in TIA, 666

topographical correlations to skull base structures, 242
Bedsores
in chronically ill patients, 247

Behavioral effects
autocerebral perfusion, hypothermia and arrest of CBF in
monkeys, 989

Benorylate
gastric bleeding and, 242, 244

Benzodiazepines
interactions with warfarin, 244

Beta adrenergic receptors
effects of adrenergic drugs on cerebral circulation, 50

Bilateral intracranial hemorrhage to
stroke mortality, 928

Black stroke patients, 406

contribution of mononeurymal intracranial hemorrhage to
epidemiology of in-hospital deaths, 923
outcome of stroke at hospital discharge, 782

Blending time
as screening test for evaluation of platelet function, 103

Blindness
internal carotid occlusion and contralateral episodic
blindness, 822

Blood-brain barrier
concomitant intravital and postmortem demonstration of
experimental damage to, 90

---

relationship of size, density and localization of intracranial
type of initial symptom, 821
spontaneous angiographic disappearance of, 821

Arteritis
giant cell
to arteries of head and neck in, 250, 709
clinical and biopsy findings, 478
immunofluorescent studies in, 999
massive brain hemorrhages, 946
Takayasu, 260

Asphyxia
effects of acute anoxia and, on rat brain, 484
unilateral brain damage produced by venous perfusion of
one carotid artery, 823

Aspirin
effect on brachial artery occlusion, 816
effect on experimentally induced thrombosis during
healing phase, 387
effect on postoperative venous thrombosis, 99
effect on thrombus formation on vascular catheters in cats,
481

Atresia
effect upon thrombosis and arrhythmia, 257
gastric bleeding and beorylate, 244
and MI in patients with rheumatoid arthritis, 260
relation between bleeding time and platelet connective
tissue reaction, 813, 816

Atherogenesis, 710
filtration theory of, 94

Atheromatous plaques
ulcerated, of carotid artery bifurcation, 912

Atherosclerosis
cerebral
in dogs, 994
in European populations: preliminary report, 898
in diabetes mellitus, 90, 482
effect of increased intracranial pressure, 795
effects of diabetes mellitus and hypertension on coronary
coronary sclerosis, 90
evaluation of lesions in cerebral arteries by unaided visual
estimation, 475
experimental
influence of segmental hypotension, 103
histrochemical and ultrastructural study of gross fatty
streak lesions, 478
in human populations, 475
hyperlipidemia and, 821
interaction of lipoproteinase with elastin of arterial intima,
708
in Japanese
preduction site of atherosclerotic lesions, 768
middle cerebral artery, 412
in Negroes and Caucasians, 475
new concept on artherogenesis and treatment of, 94, 710
plasma proteins, oxygen transport and, 97
predisposition to, in head, heart and legs: Framingham
(Mass.) Study, 401
strokes in children, 840
treatment of CVD with clofibrate, 684

Atherothrombotic brain infarction
epidemiology of in-hospital deaths among Blacks, 923
role of impaired cardiac function: Framingham Study, 715

Atlanta Community High Blood Pressure Program
screening methods, 240

Atelectasis
of rostral superior sagittal sinus, 993

Atial myxoma
cause of embolic stroke, 262

Atropine
cholinergic mechanism in cerebrovascular action of carbon
dioxide, 969

Autonomic nervous system
cerebrovascular regulation, 12

Autopsy findings
clinical effect of hyperventilation in stroke, 568

Autoregulation
acute arterial hypertension and blood-brain barrier, 323
canine cerebral circulation, 65

---

Stroke, Vol. 4, November-December 1973

1059
INDEX

Effect of dexamethasone on edema of cerebral ischemia, 148
Effect of increased intravascular pressure on, 89
Lesions following injection of contrast media into vertebral artery, 105
Blood clots
Radioactive urokinase for blood clot scanning, 100
See also Clotting
Blood flow
Cerebral. See Cerebral blood flow
Corical. See Cortical blood flow
Blood gases
Effects on pressure-flow relationships in canine cerebral circulation, 65
Blood pressure
Changes in cerebrovascular diseases, 80
Descending pathways in cervical cord of cats affecting sympathetic activity and, 249
Effects of arterial blood pressure on rCBF volume by x-ray fluorescence, 390
Pressure in pial arterial microcirculation during changes in systemic arterial, 95
Radiotelemetry by means of microcatheter technique, 485
Relationship of regional cerebrovascular CO2 reactivity to regional resting flow and, 725
Brachial artery
Nonthrombotic arterial occlusion: complication following brachial artery catheterization, 714
Thrombosis following cardiac catheterization, 243
Management of postcatheterization, 259
Brachiocephalic vessels
Surgical treatment of obstructive disease, 241
Brain abscess, neurological manifestations of infective endocarditis, 958
Arteriovenous communications in, 716
Cortico-subcortical arterial angiarchitectue in human brain, 486
Edema, steroid therapy of, 95
Effect of pH on metabolism and ultrastructure, 221
Morphologic differences in hemispheres demonstrated by carotid arteriography, 100
Necrosis and repair in immature, 863
Swelling due to experimental cerebral infarction: changes in vasomotor capacitance and effects of glycerol, 717
Brain-damaged patients
Motor response time and task difficulty, 248
Patterns in infants and children with congenital heart disease, 709
Brain injuries
Changes of CBF and CSF in, 355
Focal and rCBF calculated by bi-compartmental analysis and initial slope index, 354
Brain scanning
And EEG in detecting neurosurgical lesions, 245
Procedures and equipment, 120
Brain slices
Effect of pH on metabolism and ultrastructure, 221
Brain stem
Blood pressure changes following vascular diseases in brain stem, 80
Buerger’s disease
Aortic involvement, 713
Observations of, 822
Bypass grafts
Extracranial-intracranial, 243
See also under Surgery
C
Cannulation
Jugular bulb, simplified technique for, 955
Carbon dioxide
Blood gases and canine cerebral circulation, 65
Cerebrovascular response pattern during CO2 rebreathing, 348
Changes in cerebral vasomotor reactivity to CO2 and autoregulation following subarachnoid hemorrhage, 263
Cholinergic mechanism in cerebrovascular action of, 969
Effect on metabolism of ischemic brain in squirrel monkeys, 987
Physiological responses of cerebral circulation determined by hydrogen clearance method, 632
Regional CBF response to inhalation of carbon dioxide, 250
Relationship to blood pressure and resting blood flow, 715, 725
Carbon monoxide
Physiological and pathological effects of moderate exposure, 490
Carboxyhemoglobin levels
Association between atherosclerotic disease and, in tobacco smokers, 824
Cardiac arrest
CBF dynamics in hypotension and, 823
Cardiac output
Cardiovascular dimensions in intracranial arteriovenous malformation, 787
Carotid artery
Aneurysms, 256
Cervical internal, 260
Common carotid artery, 719
Diagnosis of internal carotid artery occlusion by Doppler sonography of ophthalmic artery, 104
Effects of intra-arterial histamine on blood flow in, 46
Endarterectomy
Shunt clamp, 486
Extracranial disease. See Extracranial carotid artery disease
Extraluminal carotid endarterectomy, 95
Fate of muscle and cotton wrapped about intracranial carotid arteries and aneurysms, 490
Heparin protection for brain during reconstruction of, 89
Internal aneurysms of, 260
Aneurysms of petrous or cavernous portions, 991
Bilateral giant aneurysms, 260
Bilateral obstruction or stenosis of, 105
Cerebral atherosclerosis in Japanese, 768
Massive epistaxis from ruptured traumatic aneurysm, 991
Traumatic aneurysms, 999
Ligation
Arterial collateralization after, 991
Cerebral edema following, in gerbils, 988
Oclusions
Changes of left and right ventricular volumes induced by propranolol and subsequent carotid occlusion, 477
Clinical evaluation and correction of, 253
Collateral cerebral blood pressure: index of tolerance to, 825
Detecting by thermography, 57
EEG and arteriographical findings in TIA, 7
Intracranial pressure and, 703
Noninvasive detection and evaluation, 825
Pulse curve in, 998
Results of carotid compression tonographic test, 716
Ultrasataural study, 964
Prognosis in TIA, 666
Pseudoaneurysms of, 998
Stenosis, 478
EEG and arteriographical findings in TIA, 7
Indications for surgery, 826
Surgical repair of cerebral ischemia due to: six-year follow-up, 486
Stroke associated with elongation and kinking of, 996
Subclavian-carotid bypass for cerebrovascular insufficiency, 95
Ulcerated atheromatous plaques of carotid artery bifurcation, 912
Carotid body
catecholamines and 5-hydroxytryptamine in vascular diseases, 85
INDEX

Carotid body–Cerebral blood flow (CBF)

Cerebral blood flow (CBF)
in acute pyogenic meningitis and acute encephalitis, 353
alpha blocked vasoconstriction, 31
autoregulation, 742
brain blood flow in conscious and anesthetized rats, 706
cannulation of jugular bulb, 952
in carotid artery stenoses, 351
cerebral blood volume measurements as index of change
in, 103
and cerebral metabolism in chronic renal insufficiency, 88
cerebrovascular regulation in preganglionic and postgang-

glionic autonomic insufficiency, 12
control of CBF in goat: role of carotid rete, 244
correlation with EEG during carotid endarterectomy, 352
detecting carotid occlusive disease by thermography, 57
effects of adrenergic drugs on, 50
effects of alpha adrenergic blockade on autoregulation and
chemical vasomotor control of CBF in stroke, 187
effects of dopamine, noradrenaline and 5-hydroxytrypta-
mine on CBF in dogs, 263
effects of hydrocephalic process on CBF, 345
effects of increased intracranial pressure on flow through
major cerebral arteries in vitro, 795
effects of intra-arterial histamine on blood flow in carotid
artery, 46
following induced subarachnoid hemorrhage in monkeys, 255
guide to safety of carotid ligation, 351
hydrogen clearance method for assessment of, 556
increase in CBF in rabbit by viritini, 218
increased binding of norepinephrine, 42, 813
influence of changes in acid-base composition of
ventricular system on CBF, 92
lactate in cerebrospinal fluid, 207
measurements
based on xenon-133 inhalation, 257
multibolus technique, 483
noninvasive I.V. isotope method, 362
procedures and equipment, 121
repeated measurements during intracranial surgery, 93
regional

talent for continuous measurement of local CBF, 255
P, and blood pressure in non-anesthe-
tized animals, 994
variability of repeated clinical measurements, 364
prognostic value of measurement in apallic syndrome, 104
raised intracranial pressure and, 87
regional
abnormalities in chronic schizophrenia, 353
arterial peaks in, 101
and hemorrhage, 102
measurement of, 349
Xenon clearance curves, 73
in cerebral infarction, 349
cerebrovascular CO2 reactivity, blood pressure, and
regional resting flow, 725
in children, 101
complications after measurements with xenon injection,
638
correlation with regional oxygen uptake using 15O
method, 102
during stimulation of seventh cranial nerve, 213
effect of intracarotid epinephrine, norepinephrine and
angiotensin, 39
effect on neuropsychological disorders, 350
effects of arterial blood pressure, 390
flow in scintigraphically positive vascular brain lesions, 349
gamma camera 1,600-channel analyzer system for
measurement of, 102
hydrogen clearance technique, 556
comparison with oxygen availability in rabbits, 904
and management of arterial hypertension, 352
measurement with anger camera, 487
microvascular surgery of brain and, 351
radioisotopic methods, 101
response to carbon dioxide inhalation in CVD, 250

flow measurement by hydrogen clearance method, 480
studies of carotid sinus and, 86
Carotid bruit
indicators of extracranial carotid artery disease, 537
significance in patients undergoing an abdominal aortic
operation, 992
Carotid-cavernous fistula
closure with polyurethane foam embolus, 705
directed embolus technique for occlusion of fistula with
preservation of carotid blood flow, 705
direct repair with preservation of carotid artery, 705
hemodynamic aspects in management of, 700
peculiar circulatory aspects, 262
Carotid-cavernous sinus fistula
as complication of carotid endarterectomy, 994
surgical correction, 486
Carotid chemoreceptors
circulatory responses to graded stimulation of, 241
Carotid compression and message
procedures and equipment, 118
results to tonographic test in carotid and verteobasilar
occlusion, 716
Carotid endarterectomies
carotid back pressure and, 488
EEG and CBF measurements during surgery, 674
relation between EEG, rCBF, and internal carotid artery
pressure, 489
Carotid sinus
baroreceptor response: partition between mechanical
properties of wall and receptor elements, 483
cardiovascular responses to various pulsatile pressures,
88
inotropic responses and peripheral vasomotor responses
from independent changes in pressure in cerebral
arteries and, 719
role of carotid chemoreceptors in CO2 hypernea under
hyperoxia, 473
studies of carotid body and, 86
Carotid sinus syndrome
permanent demand pacing for hyperventilatory, 990
surgical management, 990
Carotid siphon
arterial peaks in regional cerebral blood flow, 73
Carotid-subclavian bypass grafts
effect of peripheral resistance on carotid blood flow after,
95, 474
Carotid territory
small strokes associated with normal carotid arteriogram,
701
Catecholamines
in CSF and plasma of patients with cerebral infarction
and hemorrhage, 1000
and 5-hydroxytryptamine in carotid body in vascular
diseases, 85
increased binding of norepinephrine by nerves to cerebral
blood vessels, 42, 813
Catheters
laboratory experience with magnetically guided intravas-
cular catheter system, 814
dilute ethylencatheter embolus, 718
Cell proliferation
in atherosclerotic lesions of cholesterol-fed rabbits, 824
Cerebral apoplexy
treated with hyperventilation, 568
Cerebral arteries
cerebral atherosclerosis in Japanese, 768
effects of increased intracranial pressure on flow through
major cerebral arteries in vitro, 795
middle
anatomy: temporal branches, 412
obstruction in young subjects, 86
transorbital approach for occluding, without cranecto-
my, 202
occlusion
histochemical studies in zone of ischemia following, 85
results of proximal anterior, for anterior communicating
aneurysms, 85

Stroke, Vol. 4, November-December 1973

1061
subarachnoid and subdural hemorrhages, 431  
in subarachnoid hemorrhage, 83  
treated with hyperventilation, 568  
regulation of, in acute brain disease, 348  
relationship between different levels and reactivity to  
physiological stimuli, 250  
sympathetic control in dogs, 98  
symposium abstracts, 321  
time course of cerebral circulatory response to metabolic  
depression, 361  
valsalva maneuver and CBF velocity, 247  
See also Cerebral circulation  
Cerebral blood vessels  
increased binding of norepinephrine by nerves to, 42, 813  
Cerebral blood volume  
measured by x-ray fluorescence, 700  
measurements as index of change in cerebral blood flow, 103  
Cerebral circulation  
cholinergic control of cortical blood flow, 232  
effects of blood gases on pressure-flow relationships, 65  
effects of sympathomimetic amines on, 993  
experimental studies of hyperemia phenomena, 102  
binding of norepinephrine by nerves to cerebral  
blood vessels, 42, 813  
lactate in cerebral spinal fluid and pressure-flow relation-  
ship in canine cerebral circulation, 207  
physiological responses determined by hydrogen clearance  
methods, 632  
quantitative studies with sodium pertechnetate, 821  
regional autoregulation to increased perfusion pressure in  
normocapnia and hypercapnia, 139  
regional CBF during stimulation of seventh cranial nerve, 213  
See also Cerebral blood flow  
Cerebral death. See Death, cerebral  
Cerebral hemorrhage  
familial incidence of, 38  
natural history of stroke in Rochester, Minn., 20  
See also Hemorrhages  
Cerebral infarction  
blood pressure changes in CVD, 80  
dexamethasone in CVD, 547  
impaired neurogenic CV control and dysautoregulation  
after stroke, 169  
intracranial pressure gradients caused by cerebral ische-  
mia and edema, 694  
management of completed strokes with dextran 40, 895  
measurement of edema with sodium 22, 461  
natural history of stroke in Rochester, Minn., 20  
nonaneurysmal intracranial hemorrhage and stroke mor-  
tality among Blacks, 928  
plasma renin activity in acute CVD, 160  
transorbital approach for occluding middle cerebral artery  
without craniectomy, 201  
Cerebral metabolism. See Metabolism, cerebral  
Cerebral perfusion pressure. See Perfusion pressure  
Cerebral vascular resistance  
effects of adrenergic drugs on cerebral circulation, 50  
Cerebrovascular occlusive disease  
effects of intra-arterial histamine, 46  
Cerebral venous blood  
cisternal cerebrospinal fluid and, following arterial air  
embolism, 85  
Cerebrospinal fluid  
alterations in fluid flow dynamics in cerebrovascular  
occlusive disease, 91  
catecholamine concentrations in cerebral infarction and  
hemorrhage, 1000  
changes by hyperventilation in stroke, 620  
dexamethasone in CVD, 541, 547  
dynamics and spinal dura mater, 246  
lactate in, and pressure-flow relationships in canine  
cerebral circulation, 207  
ratio of oxygen turnover in, 87  
serial changes in acid-base values in blood and, 820  
serial changes in plasma urea electrolytes and osmolality, 820  
value of continuous measurement of acid-base balance  
after cerebrovascular accident, 102  
Cerebrovascular accidents  
control of cerebral circulation, 207  
manifold in cyanotic congential heart disease, 825  
value of continuous measurement of acid-base balance in  
cerebrospinal cord after, 102  
Cerebrovascular disease  
blood pressure changes, 80  
epidemiology of in-hospital deaths among blacks, 923  
evaluation of stroke intensive care, 737  
familial incidence of cerebral hemorrhage, 38  
TIAs and risk of stroke in elderly, 980  
treatment with clofibrate, 684  
value of neurovascular care units, 933  
Cerebrovascular insufficiency  
prognosis in TIA, 666  
Cerebrovascular occlusive disease  
alterations in cerebrospinal fluid flow dynamics, 91  
Cerebrovascular regulation  
in preganglionic and postganglionic autonomic insufficien-  
cy, 12  
Cerebrovascular resistance  
increase in CBF by viquidil, 218  
regional autoregulation in cerebral circulation, 139  
Cervical cord  
experimental cervical myelopathy, 700  
Cervical sympathetic chain  
alpha blocked vasoconstriction, 30  
Charcot-Bouchard aneurysms  
massive brain hemorrhage, 946  
Chemical control  
circulation to the brain of rats during acute and prolonged  
hypercapnia and hypocapnia, 326  
dual control of cerebral circulation, 327  
effect of alpha adrenergic blockade on autoregulation  
and, 187  
effect of changes in potassium concentration in hypotha-  
lamic blood flow, 328  
effect of hypoxia on autoregulation and CO2 reactivity, 328  
effect of metabolic alkalosis on CBF, 326  
teractions of ionic mechanisms of pial vessels, 328  
terependence of capillary flow and rCBF, 327  
primate pial arterial pressure responses to dangers in  
spired CO2 and systemic arterial pressure, 327  
Children and infants  
cerebellar hematomas, 87  
cerebral aneurysms, 997  
diagnosis and medical treatment, 871  
aneurysms, 878  
arterial thrombosis, 875  
clinical manifestations, 875  
differential diagnosis, 883  
embolism, 870  
general physical examination, 878  
hemorrhage, 877  
intracranial arteriovenous malformations, 877  
laboratory tests, 881  
nuroradiology in, 1008  
spinal arteriovenous malformation, 877  
venous occlusion, 876  
epidemiology of strokes in, 835  
abnormalities of internal carotid artery and intracranial  
arteries, 844  
congenital heart disease, 840  
death certificate data, 837  
dehydration and/or hyperosmolality, 845  
drug abuse, 843  
epilepsy, 845  
hematologic disorders, 841  
hermonovascular, 845  
emphobia, 845  
emolipid-uremic syndrome, 842  
emophilia, 842
Cholesterol

Strokes, Vol. 4, November-December 1973

Effect of cholesterol-lowering diet on mortality from

neuropathology of strokes, 860
medical management, 888
neurosurgical management, 1021
extracranial vascular disorders, 1021
intranuclear vascular disorders, 1022
procedures to alleviate chronic disability, 1025
spinal cord disorders, 1024
patterns of brain damage in children with congenital heart disease, 709
plasma and dietary cholesterol in infancy, 483
predisposing factors, 873
prognosis, 890
psychosocial and educational management, 1045
education of child, 1046
effects of acquired neurological deficit, 1045
family and handicapped child, 1045
rehabilitation, 1029
current research, 1039
impact of acquired disability, 1029
parental reactions, 1030
reactions of child, 1029
team approach, 1030
allied health professionals, 1034
medical staff, 1031
See also Young adults
Cholesterol

cell proliferation in atherosclerotic lesions of cholesterol-fed rabbits, 824
effect of cholesterol-lowering diet on mortality from coronary heart disease, 255
effect of sodium dextranthyroxine on serum cholesterol and mortality rates, 998
embolization, 479
morbidity and survivorship of patients with embolic cholesterol crystals in ocular fundus, 718
plasma and dietary cholesterol in infancy, 483

INDEX

in regions with defined endothelial integrity in normal rabbit aorta, 824
serum levels of Mexican and Wisconsin children, 87
Cholinergic mechanism
in cerebrovascular action of carbon dioxide, 969
cortical blood flow of rats, 232
Choroid plexus
cryptic hemangioma of, 486
sympathetic nervous influence of blood circulation and carbonic anhydrase activity in, 368
Circle of Willis
cerebral atherosclerosis in European populations, 898
hypoplasia associated with cerebro-cerebellar vascular micromalformations in children, 996
Circulatory arrest
neuropathology in adult monkeys, 99
topography of impaired microvascular perfusion in primate brain following, 257
Cisternal cerebrospinal fluid
hyperoxia of cerebral venous blood and, 85
Clinical investigation
research needs, 516
Clofibrate
induced acute muscular syndrome, 248
treatment of CVD with, 684, 716
type IV hyperlipoproteinemia, 259
Clonidine
prolonged treatment with, 250
Coagulation
clotting abnormalities as risk factor for stroke, 643
disseminated intravascular, 702
and fibrinolysis in relation to physical activity, 827
simultaneous use of multiple fibrometers for heparin assays and, 241
stroke and blood coagulation, 400
See also Anticoagulant therapy
Comatose patients
brain-death, 284
management of, 281
rCBF, ICP and brain metabolism in, 814
Complications
acute stroke management and patient outcome: value of neurovascular care units, 933
after rCBF measurements with xenon, 658
Comprehensive Stroke Programs
illustration of community hospital program, 520
manpower requirements, 514
North Carolina, 531
organization of local, 528
Compression, cerebral
pulmonary edema and hemorrhage resulting from, 714
Computer analysis
cardiovascular dimensions in intracranial arteriovenous malformation, 787
digital dynamic radionuclide studies of cerebral circulation, 483
results of peripheral arterial operations, 261
Congenital factor VII deficiency with cerebral hemorrhage treated with prothrombin concentrate, 487
Congenital heart disease
cerebral vascular accidents in, 825
strokes in children, 840
Contraceptives. See Oral contraceptives.
Contrast media
angiography in allergic women sensitive to, 259
effect of cellular level in brain, 994
effects of arterial blood pressure on rCBF, 390
intranuclear hemorrhage, 307
lesions of blood-brain barrier following injection of, into vertebral artery, 105
Corneal reflex
in hemisphere disease, 699
Coronary artery disease
clinical arteriographic study of progression of, 817
diabetes mellitus and, 820
Coronary care units
evaluation of stroke intensive care, 737
INDEX

Coronary heart disease
effect of cholesterol-lowering diet on mortality from, 255
risk factors, 99

Cortex
cholinergic control of cortical blood flow, 232
hydrogen clearance method in assessment of blood flow in, 536
physiological responses of cerebral circulation, 632
regional CBF during stimulation of seventh cranial nerve, 213

Cortical blood flow
cholinergic mechanism in cerebrovascular action of carbon dioxide, 969

Coumarin
dermal gangrene complication of, 718

Cyclic AMP
AMP inhibition of reactions of ADP with washed platelets from humans and rabbits, 93
effect on rCBF in baboons, 357

Cyclobenzaprine
in treatment of spasticity, 477

Cyclopropane
effect on canine cerebral blood flow and metabolism, 87

Cytoid bodies
retinal cotton wool spots and, 488

Death, cerebral
angiography of, 258
rapid and reliable diagnostic adjunct using radioisotopes, 718
spinal reflexes in, 997
technique for assessment of cerebral circulation, 344

Depression
time course of cerebral circulatory response to metabolic depression, 361

Dermal gangrene
complication of coumarin therapy, 718

Detergents
effect on platelet electrophoresis and aggregation, 822

Dexamethasone
in CVD
controlled study in acute cerebral infarction, 547
controlled study in intracerebral hemorrhage, 541
effect on edema of focal cerebral ischemia, 148
effect on experimental cerebral infarction in gerbil, 240
effect on stroke, 260
rCBF and vasomotor response in brain tumors following, 354

Dextran 40
management of completed strokes with, 895

Diabetes mellitus
effects on coronary sclerosis, 90
epidemiology of in-hospital deaths among Blacks, 923
intracranial vascular lesions in, 996
optic nerve involvement in, 699
risk factor in stroke patients, 751
stroke and blood coagulation, 400
TIAs and risk of stroke in elderly, 980

Diagnosis
aneurysms, 878
arterial thrombosis, 875
arteriovenous malformations, 877
in children, 875
hemorrhage, 877
neuroradiology, 1008
intracranial hemorrhage, 306
retinal ischemic symptoms, 249
transient attacks of neurological dysfunction, 278
venous occlusion, 876

Diastasis membranes
hemostatic changes associated with thrombus formation on, 480
method for measurement of platelet adhesiveness by use of, 472
reduction of thrombus formation by aspirin and RA 233, 478

Dibozane
alpha blocked vasoconstriction, 30

Diets and nutrition
lipid and lipoprotein responses of hypertriglyceridemia to low-carbohydrate modifications of AHA fat-controlled diet, 245

Diphenylhydantoin
effects on local CBF, 357

Dipyridamole
failure in reducing infarct size following experimental coronary occlusion, 710

diurnal variations
in onset of stroke, 773

Dopamine
species difference in carotid body response of cat and dog to serotonin and, 476

dorsal sagittal sinus
 canine cerebral circulation, 65

Drop attacks
affliction of women, 817

Drug abuse
stroke in children, 843

Drug-induced seizures
temporary alteration of cerebrovascular permeability to plasma protein during, 93

Drug interactions
in oral anticoagulant and antihypertensive adrenergic neuron-blocking drugs, 473
sodium warfarin and disulfiram, 484

Echocardiography
left atrial myxoma, 451

Echocerebrofluorography
midline, 130

Edema
of cerebral ischemia
effect of dexamethasone, 148
following carotid artery ligation in gerbils, 988
steroid therapy, 95
intracranial pressure gradients caused by cerebral ischemia and, 694
measurement of cerebral infarction edema with sodium 22, 461

Elastin layer
experimental arterial thrombosis formation in vivo by proteolytic enzyme perfusion and role of, 819

Elderly persons
ergot alkaloid preparation vs. papaverine in treating common complaints, 829
latent cerebral venous thrombosis, 419
motor response time and task difficulty, 248
systemic lupus erythematosus in, 253
TIAs and risk of stroke in elderly poor population, 980

Electrical activity
alterations in cerebral energy metabolism, CBF during indolokon-induced seizures, 350
behavioral blood flow and, 358
mechanism of cerebral hyperemia in electrically induced epileptic seizures, 359
rCBF and focal cortical epilepsy, 359

Electrocardiography
changes after spinal subarachnoid hemorrhage, 156
intracranial hemorrhage, hypokalemia and, 987
patterns useful in diagnosis of intermittent heart block, 256

Electroencephalography
arteriographical and EEG findings in carotid artery TIA, 7
changes after transient cerebral ischemia due to cardiac arrest, 251
EEG and CBF measurements during carotid endarterectomy, 674

Stroke, Vol. 4, November-December 1973

(1064)
hypotension and its effect on EEG activity in dogs, 101
intravascular intracranial EEG recording, 814
procedures and equipment, 118
relationship between CBF and EEG during photic stimulation in rabbits, 362
value of brain scans and, in detecting neurosurgical lesions, 245
Electrolytes
CBF, brain water and electrolytes during postischemic recovery, 340
disturbances of serum, after surgery of intracranial arterial aneurysms, 96
Electron microscopy
intervention of human intracranial arteries, 716
Electrolystagnography (ENG) procedures and equipment, 131
Embolism, cerebral
anatomy of middle cerebral artery, 412
in children, 1015
cholesterol embolization, 479
clinical diagnosis, 305
experimental arterial
changes in luminal surface ultrastructure, 827
intracranial surgical treatment of, 1001
left atrial myxoma, 451
middle cerebral artery embolectomy and vasospasm, 446
neurological manifestations of infective endocarditis, 958
paradoxical, 242
pathophysiology, 305
platelet-fibrin effect of aspirin on thrombosis, 387
postmortem findings following embolization of arteriovenous malformation, 472
review and current perspectives, 247
spinal cord emboli and their relevance to aortic atheroma, 716
ulcerated atheromatous plaques of carotid artery bifurcation, 912
Encephalitis
CBF, metabolism, and CSF acid-base parameters in, 353
Encephalopathy
pathogenesis of hypertensive, 988
Endarterectomy
carotid, 299
carotid back pressure and, 488
carotid-cavernous sinus fistulas as complication of, 994
EEG and CBF measurements during, 674
relation between EEG, rCBF and internal carotid artery pressure, 489
shunt-clamp, 486
effect of induced hypertension on internal carotid artery pressure and regional CBF, 261
external carotid artery, significance in management of extracranial CV occlusive disease, 993
gas, six-year follow-up, 488
Endocar demonstrated angiographic demonstration of intradural intracranial arteries, 481
Fibrinogen
abnormalities in clotting and thrombolysis as risk factors for stroke, 643
concentration and immunoelectrophoresis in internal jugular vein, 807
incorporation into coronary arterial thrombi in AMI, 701
plasma fibrinogen recovery rate after administration of snake venom, 263
and platelet consumption in man, 486
Fibrinolysis
blood coagulation and, in relation to physical activity, 827
hemostasis and, 90
monitoring antifibrinolytic therapy in SAH, 818
and subarachnoid hemorrhage, 252
Fibrinolytic activity
enhancement by stanozolol, 101
in Hawaiian and Japanese men in Hawaii, 705
histochemical study, 992
and intracerebral hemorrhage, 251
platelet adhesiveness, coagulation and, in obesity, 106
Fibromuscular dysplasia in children, 1014
involving intracranial vessels, 699
cryptic hemangioma of choroid plexus, 486
in new born, 846
massive brain, 946
neurosurgical management in children, 1022
nonaneurousmal intracranial, and stroke mortality in
Blacks, 928
plasma prolin activity in acute CVD, 160
primary ponine
revealed by pneumoencephalo-RouIette tomography, 258
pulmonary edema and, resulting from cerebral compres-
sion, 714
retinal
intrapranal aneurysms and, 103
subarachnoid
EKG changes after, 156
formation of cerebrospinal fluid xanthochromia after, 100
pulmonary edema secondary to, 104
regional cerebral blood flow studies, 83
See also Subarachnoid hemorrhages
subarachnoid
clinical grade, rCBF and angiographical spasm in
monkey after, 431
tracheostomies and stroke, 459
Hemostasis
fibrinolysis and, 90
Heparin
coating of catheters against thromboembolism in percuta-
neous catheterization for angiography, 490
laboratory control of simultaneous treatment with oral
anticoagulants and, 258
modified whole blood partial thromboplastin test for, 993
plasma heparin: unique, practical, submicrogram-sensitive
assay, 711
polybrene neutralization for monitoring blood levels of, 95
precise management of heparin therapy, 477
protection for brain during carotid artery reconstruction, 89
simultaneous use of multiple fibrometers for coagulation
factor and heparin assays, 241
systemic heparinization for angiography, 260
value of monitoring heparin treatment with activated
partial thromboplastin time, 103
Heronin addiction
favorable experience with bacterial endocarditis in, 484
Histamine
effects of intra-arterial histamine on blood flow in internal
and external carotid artery, 46
Homonymous hemianopia
review of 104 cases, 988
visual field defects and prognosis of stroke, 163
Hospitals
cardiac monitoring of acute stroke patients, 88
classification of health care centers, 522
epidemiology of in-hospital deaths among Blacks, 923
evaluation of stroke intensive care, 737
evaluation of stroke care units, 933
illustration of community hospital stroke program, 520
neurovascular care units, 933
organization of local stroke program, 528
outcome of stroke at hospital discharge in New York City
Blacks, 782
Hydergine
use of ergot preparation in convalescent phase of stroke, 818
versus papaverine in treating aged, 820
Hydrogen clearance method
assessment of blood flow in cortex, white matter and deep
nuclei of baboons, 556
rCBF determination by, and comparison with oxygen
availability in rabbits, 904
physiological responses of cerebral circulation, 632
6-Hydroxydopamine
intracisternally administered, 474
Stroke, Vol. 4, November-December 1973
effectiveness of low saturated fat, low cholesterol diet, 709
lipid and lipoprotein responses to low-carbohydrate treated modification of AHA fat-controlled diet, 245
propranolol and, 825
Hypertension
CSF acid-base balance and intracranial pressure changes, 620
clinical effect in stroke, 568
effect on energy and acid-base states of rat brain, 378
Hypocapnia
blood gases and canine cerebral circulation, 65
CSF changes by hyperventilation in stroke, 620
clinical effect of hyperventilation in stroke, 620
systemic circulatory responses to, 480
Hypocapnic alkalosis
mechanisms of action on limb blood vessels, 480
Hypoglycemia
brain metabolism during, 712
brain oxygen supply and neuronal activity under normal and hypoglycemic conditions, 714
Hypoplasia
in children, 681
circle of Willis associated with micromalformations in children, 996
non-filling of intracranial circulation in association with carotid hypoplasia and dural sinus thrombosis, 262
Hypotension
autoregulation and hyperemia of CBF as evaluated by thermal diffusion, 917
CBF dynamics in, 823
cerebral dysautoregulation in central neurogenic orthostatic, 820
effect of EEG activity in dogs, 101
idiopathic orthostatic, 96
induced, blood and CSF lactate during, 823
fluence of segmental, on experimental atherosclerosis, 103
platelet aggregates during hypovolemic hypotension in dogs, 998
vascular mechanisms controlling autoregulation, 742
Hypothermia
behavioral effects of autoregulated perfusion, arrest of CBF and, in monkeys, 980
cerebral circulation and metabolism, 257
excision of giant basilar aneurysms, 240
Hypoxia
behavioral and neurological disturbances associated with hypoxic brain damage, 996
effect of prolonged hypoxia on cerebral circulation, 711, 712
effect on glycogen stores in adult cat brain, 262
effects of blood gases on pressure-flow relationships in canine cerebral circulation, 65
plasma proteins, oxygen transport and atherosclerosis, 97
relative rates of arterial lactate and oxygen-deficit accumulation in hypoxic dogs, 988
response of brain to ischemia and, 820
ultrastructure of central nervous system after prolonged hypoxia, 711, 712

ICeland
primary SAH in Iceland, 764
Idiopathic autonomic insufficiency
cerebrovascular regulation and, 12
Idiopathic orthostatic hypotension
in children, 681
with levodopa and MAO inhibitor, 96
Immunonephrophoresis
and fibrinogen concentration in internal jugular vein, 807
Immunosuppression
in arterial and venous allografts, 700

Incidence
familial incidence of cerebral hemorrhage, 38
latent cerebral venous thrombosis syndrome, 419
natural history of stroke in Rochester, Minn., 20
primary SAH in Iceland, 764
risk factors in stroke in Mexican patients, 773
stroke in central Harlem, 406
stroke in Jerusalem district (1960-67), 465
strokes in children, 838
Infections
stroke in children, 842
Infective endocarditis
neurological manifestations, 958
Inferior sagittal sinus
venous drainage, 482
Injuries, cerebral
changes in cerebrospinal fluid and blood after, 258
focal and rCBF calculated by bicompartamental analysis in acute brain injuries, 354
penetrating injuries of parapharyngeal space, 93
See also Head Injuries
Insufficiency, cerebrovascular
subclavian-carotid bypass graft for, 95
Insulin
effect on regional central nervous system, 712
Intensive care units
evaluation of stroke intensive care: results in municipal hospital, 737
International Symposium on Cerebral Circulation and Metabolism
abstracts, 321
See also Symposium abstracts
Intimal repair
carotid TIA associated with antplatelet aggregation therapy, 732
effect of aspirin on thrombosis, 387
Intracranial arteries
angiographic demonstration of fenestrations of intradural intracranial arteries, 481
innervation of human, 716
upper gastrointestinal bleeding as complication of, 86
Intracranial occlusive disease
in children, 1014
Intracranial pressure (ICP)
cerebral blood flow and, 87
CSF changes by hyperventilation in stroke, 620
comparative effects upon cerebral oxygenation and brain survival, 346
effect of increased intravascular pressure on blood-brain barrier to protein in dogs, 89
effects of mass-induced, on arterial hypertension and survival, 473
gradients caused by cerebral ischemia and edema, 347, 694
increased
cortical electrical activity, perfusion pressure and CBF, 346
effects on flow through major cerebral arteries in vitro, 795
effects upon cerebral oxygenation, cortical evoked potential and brain survival, 346
gradients and cerebral hemisphere blood flow differences during unilateral supratentorial mass lesions, 347
patients with severe head injuries, 348
supratentorial and infratentorial mass lesions in primates, 992
transorbital approach for occluding middle cerebral artery without craniotomy, 201
Intracranial vascular disorders
neurosurgical management in children, 1022
Intracranial venous thrombosis
in children, 1016
Intracranial vessels
fibromuscular dysplasia, 699
Intradural arteries
structural changes following subarachnoid hemorrhage, 701

Stroke, Vol. 4, November-December 1973
INDEX

[Ischemia, cerebral-Manpower]

Ischemia, cerebral
- anatomy of middle cerebral artery, 412
- anoxia and critical oxygen tension in brain tissue, 341
- assessment of cerebral circulation: cerebral death, 344
- CBF and metabolism at different levels of decreased cerebral perfusion pressure, 341
- CBF and metabolism in high altitude residents, 345
diffuse, 339
disturbances of cerebral microcirculation after, 339
during cardiac resuscitation, 256
effect of anticoagulants, vasodilators, and dipryridamole on postischemic cerebral vascular obstruction, 256
effect of dexamethasone on edema of, 148
effect of hypoxia and, on pyridine nucleotide redox state
- effects of adrenergic drugs on cerebral circulation, 50
diffuse, 339
- disturbances of cerebral microcirculation after, 339
during cardiac resuscitation, 256
effect of anticoagulants, vasodilators, and dipryridamole on postischemic cerebral vascular obstruction, 256
- effect of dexamethasone on edema of, 148
- effect of hypoxia and, on pyridine nucleotide redox state
disorders of cerebral microcirculation after, 339
in experimental shock induced by endotoxin, 340
hypertension and diabetes as risk factors in stroke, 751
induction in dogs without disturbance of general circulation, 253
intracranial pressure gradients caused by edema and, 694
intrinsic metabolic mechanism to protect brain during progressive ischemia, 343
- lactic acid efflux from, 999
- metabolism and function of dog's brain recovering from long-term ischemia, 476
- moderate hypoxic ischemia irreversibly damages rat brain in 30 minutes, 339
- plasma renin activity in acute CVD, 160
- postischemic recovery
- CBF, brain water and electrolytes, 340
- cerebral metabolic state during, 343
- factors improving cerebral vascular obstruction, 345
- ICP, brain blood flow regulation and glucose, oxygen metabolism after 15 minutes of circulatory arrest, 342
- of nucleotide metabolism in cat brain, 340
- oxygen availability and consumption of isolated canine perfused brain, 94
- tissue-Pco2 and cell function in micro-area of brain during hypoxia, 342
- transorbital approach for occluding middle cerebral artery without craniectomy, 201
- ischemic heart disease
- and dietary fiber, 261
- familial incidence of cerebral hemorrhage, 38
- Ischemic stroke
- racial differences, 259
- Isoproterenol
- effects of adrenergic drugs on cerebral circulation, 50
- management of cerebral vasospasm using lidocaine, 256
- Isotope technique
- validity of intravenous, in CBF studies on subarachnoid bleeding, 251
- See also Radioisotopic studies

J

Jakob-Creutzfeldt disease
- EEG changes resembling, in transient cerebral ischemia due to cardiac arrest, 251
Japanese
- cerebral atherosclerosis in Japanese
- prediction site of atherosclerotic lesions, 768
- population survey on cerebral and cardiovascular diseases, 86
Jerusalem
- stroke in Jerusalem district (1960-67); epidemiological study, 465
Joint Committee for Stroke Facilities
- Diagnosis and Management of Stroke, 112
- Epidemiology of Strokes in Children, 834
- Manpower, 513
- Medical and Surgical Management of Stroke, 270

K

Krypton
- increase in CBF by viquidil, 218

L

Lactate
- CSF changes by hyperventilation in stroke, 620
- Lactic acidosis
- effect of dexamethasone on edema of cerebral ischemia, 148
- from ischemic brain, 999
- lactate in cerebrospinal fluid, 207
- Latent cerebral venous thrombosis syndrome
- frequency, relation to age, and congestive heart failure, 419
- Leptomeningitis
- cerebral infarcts complicating neonatal leptomeningitis: acute and residual lesions, 818
- Lesions
- remitting signs in cerebral mass lesions, 989
- See also Focal lesions
- Leukemia
- massive brain hemorrhages, 946
- strokes in children, 841
- Levodopa
- idopathic orthostatic hypotension treated with, 96
- Lidoxazline
- effect on platelet function in vitro, 717
- Limb blood vessels
- mechanisms of action of hypocapnic alkalosis on, 480
- Lipids
- metabolism, of heart and arteries in relation to ischemic heart disease, 704
- treatment of CVD with clofibrate, 684
- Lipoproteins
- ultrafiltration, 94
- Lumbar puncture
- procedures and equipment, 122
- Lyssolecithin
- influence on platelet aggregation, 718

M

Macroglobulin
- fibrinogen concentration and immuno-electrophoresis in internal jugular vein, 807
- Malformations, arteriovenous
- See Arteriovenous malformations
- Malignant neoplastic diseases
- nonbacterial thrombotic endocarditis in, 704
- Mannitol
- effect on CBF, 819
Manpower
- comprehensive stroke centers, 514
- current availability of physicians, selected specialists and therapists, 525

Strokes in Children (Part I), 834
- Diagnosis and Medical Treatment, 871
- Epidemiology of Strokes in Children, 834
- Neuropathology of Strokes in Children, 859
Strokes in Children (Part 2)
- Neuroradiology in Diagnosis of Childhood Stroke, 1008
- Neurosurgical Management of Strokes in Children, 1021
- Psychosocial and Educational Management of the Child with Stroke, 1045
- Rehabilitation of Children with Stroke, 1029
- Training, Education, Manpower, and Research for Stroke Care, 499

Jugular bulb
- simplified technique for cannulation of, 955
- Jugular vein
- internal, fibrinogen concentration and immuno-electrophoresis in, 807

Stroke, Vol. 4, November-December 1973

1069

Downloaded from http://stroke.ahajournals.org/ by guest on August 28, 2017
estimating requirements, 513
Joint Committee for Stroke facilities, 499, 513
training and education, 499
Massive epistaxis
from ruptured traumatic internal carotid artery aneurysm, 991
Mast cells
possible role in controlling diameter of arterioles, 717
Medical and surgical management
acute stroke and patient outcome: value of neurovascular care units, 933
carotid artery syndrome, 278
in children, 488
of completed strokes with dextran 40, 895
differential diagnosis, 279
evaluation of stroke-suspect patient, 274
intracranial hemorrhage, 306, 307
management of the patient, 280
cerebral embolism, 304
comatose patient, 281
consultation and decision to transfer, 280
decision to hospitalize, 280
prognosis in TIA. 666
transient attacks of neurological dysfunction, 278
vertebral-basilar artery syndrome, 278
Medullary infarcts
automatic respiratory failure associated with, 995
Memory difficulties
mesial temporal substratum of memory, 487
Meningitis
CBF in patients with, 353
haemophilus influenzae, vascular lesions in, 489
Meningoencephalitis
neurological manifestations of infective endocarditis, 958
Mental retardation
cerebral angiography in, 489
Meprobamate
prothrombin levels maintained with warfarin and, 101
Metabolism
cerebral autoregulation and, with deep hypothermia, 379
and cerebral blood flow in renal insufficiency, 88
effect of controlled hyperventilation on energy and acid-base states of rat brain, 378
effect of GABA on brain ATP formation, 374
effect of pH on ultrastructure and, of cerebral cortex slices, 221
effects of metabolic inhibitors on cerebral hemodynamics, electrical activity and cation transport, 375
effects of morphine and nalorphine on cerebral circulation and, 474
method for serial study of rCBF and, 377
potassium effects on energy metabolism and epileptiform activity in cat hippocampus, 375
prognostic value of carbohydrate metabolites in CSF, 360
question of uncoupling of cerebral oxidative phosphorylation in acute cerebral infarction, 378
study of PNC in CSF during clinical anesthesia, 377
in vivo measurement of cerebral glucose metabolism employing 14C-labeled glucose, 376
Methodology
atraumatic CBF estimation in man, 362
brain concentration of nicotine and antipyrine after intravenous injection, 336
determination of diffusion shunt in brain and its influence on blood flow measurements, 337
discrepancies in results of flow measurements using different isotopes, 335
diurnal rhythms in cerebral blood volume in mice, 366
effect of changes in CBF on compartmental weight, 337
heterogeneity of rCBF and regional distribution of relative weights of gray and white matter, 337
heterogeneity of tritiated water uptake by brain, 339
influence of capillary permeability limitations on measurement of rCBF, 335
measurement of cerebral infarction edema with sodium, 22, 461
microsphere technique to measure rCBF, 338
noninvasive I.V. isotope method for measuring cerebral blood flow, 362
pulsatile blood flow pattern, 338
256 detector system for rCBF, 365
variability of repeated clinical measurements of CBF, 364
variation in gamma index, 336
xenon CBF studies
differences between "81-key and 31 key" decay curves, 364
pitfalls in studies in head-injured patients, 364
quantitating local CBF in 144 subdivisions of human brain, 365
Xenon inhalation technique for measuring CBF, 363
in carotid endarterectomy, 363
Methoxyflurane
effects on canine cerebral metabolism and blood flow, 708
Methylmethacrylic cement
fat embolism and cerebral infarction after use of, 254
Mexicans
risk factors in stroke, 773
Middle cerebral artery aneurysm
anatomy: temporal branches, 412
embolectomy and prolonged widespread vasospasm, 446
occlusion, 694
transorbital approach for occluding, without craniectomy, 201
Migraine headaches
5-hydroxytryptamine levels and platelet aggregation in, 246
stroke in children, 845
vasomotor paralysis in, 352
Monitoring
cardiac monitoring of acute stroke patients, 88
Morbidity
prognosis in TIA, 666
strokes in children, 838
treatment of CVD with clofibrate, 684
Morphine
effects of nalorphine and, on canine cerebral metabolism and circulation, 474
Mortality
epidemiology of in-hospital deaths among Blacks, 923
evaluation of stroke intensive care, 737
factors in patients with acute stroke, 997
natural history of stroke in Rochester, Minn., 20
nonaneurysmal intracranial hemorrhage and stroke mortality among Blacks, 928
prognosis in TIA, 666
strokes among U.S. veterans in Georgia and five Western States, 702
strokes in children, 837
treatment of CVD with clofibrate, 684
"Moya-Moya" syndrome
bilateral obstruction or stenosis of internal carotid arteries, 105
multiple progressive intracranial arterial occlusions, 380
progressive alternating hemiplegia in early childhood, 1000
stroke in children, 846
in two non-Japanese individuals, 262
Multiple intracranial arterial aneurysms
treatment of, 991
Multiple progressive intracranial arterial occlusive disease
in children and young adults, 380
Muscle spasticity
cyclobenzaprine in treatment of, 477
dimethothiazine in, 708
INDEX

Muscular syndrome
cliofibrate-induced, 248
Myelomalacia
angiographic demonstration of spinal cord arterial occlusion in post-radiation, 704
Myocardial infarction
biochemical evaluation of treatment with streptokinase in AMI, 104
blood coagulation and fibrinolysis after MI, 252
low-dose heparin after, 245
phenformin plus ethylloestradiol in survivors of MI: three-year pilot study, 245
treatment of CVD with clofibrate, 684
Myocardial necrosis
protection against epinephrine induced, by drugs that inhibit platelet aggregation, 479
Myogenic mechanisms
regional autoregulation in cerebral circulation, 139
Myxoma
atrial myxoma and central retinal artery occlusion, 717
left atrial myxoma as neurological problem, 451
N
Nalorphine
effect on cerebral metabolism and circulation, 474
Natural history of stroke
in Rochester, Minn. (1955-1969), 20
Neck
TIAs and stenotic lesions of neck vessels, 294
vertebral artery obstruction by hyperextension of neck, 997
Neisseria meningitidis infection
ruptured mycotic pericallosal aneurysm and, 247
Neoplasms
massive brain hemorrhage, 946
Nervous system
autonomic
cerebrovascular constriction blocked by adrenergic alpha receptor antagonists, 30
cerebrovascular regulation and, 12
plasma renin activity in acute CVD, 160
crCBF during stimulation of seventh cranial nerve, 213
sympathetic
cerebrovascular constriction blocked by adrenergic alpha receptor antagonists, 30
increased binding of norepinephrine by nerves to cerebral blood vessels, 42, 813
Neural vascular control
sympathetic
cerebrovascular constriction blocked by adrenergic alpha receptor antagonists, 30
Neurogenic control
abnormal CBF regulation in complete cervical cord transection, 367
adrenergic innervation of blood vessels in central nervous system, 369
autonomic control of CBF and autoregulation, 370
autoregulation in human retinal circulation, 373
autoregulation of cerebral circulation in orthostatic hypotension, 372
central nervous system control of baroreceptor reflexes, 472
of cerebral circulation, 1000
cholinergic and adrenergic innervation of cerebral vessels, 370
cholinergic innervation of pial arterial system, 371
correlation between oxygen cycles in contralateral regions of brain, 374
effects of alpha adrenergic blockade, 187
on crCBF and CO, responsiveness in CVD, 372
on cerebral circulation in hypoxemia, 366
effects of noradrenaline, 5-hydroxytryptamine and dopamine on CBF, 367
effects of sympathetic nerve stimulation on cerebral and cephalic blood flow, 369
evidence for adrenergic control of CV tone, 368
innervation on cerebral arterioles, 371
localized neurogenic vasoconstriction of basilar artery, 373
mechanisms maintaining constant blood supply to brain, 373
regional differences in beta-adrenergic effects on local CBF and in sympathetic vascular innervation, 369
responses of hypoxic guinea pial microvessels to isoproterenol, 374
sympathetic control of CBF in goats, 367
sympathetic innervation and CO2 sensitivity, 366
sympathetic nervous influence of blood circulation and carbonic anhydrase activity in choroid plexus, 368
sympathetic neural influence on norepinephrine vasoconstriction in brain vessels, 474
sympathetic stimulation, regional brain blood flow, 370
upper limit of autoregulation and sympathetic system, 372
vasoconstriction of basilar artery, 760
Neurological assessment
left atrial myxoma, 451
subarachnoid and subdural hemorrhages, 431
Neurological complications
infective endocarditis, 958
Neurological examinations
children with stroke, 898
evaluation of stroke-suspect patients, 275
prognosis in TIA, 666
Neurological history
evaluation of stroke-suspect patients, 274
stroke-suspect patients, 274
Neurological symptoms
impaired neurogenic cerebrovascular control and dysautoregulation after stroke, 169
Neurosurgical lesions
brain scans and EEG in detecting, 245
Neurons
earliest alterations in rat neurons and astrocytes after anoxia-ischemia, 815
Neuropathology
in children, 860
abnormalities of blood vessel pattern, 863
abnormalities of organization of blood vessels, 860
collateral circulation, 860
free blood within cranium of neonates, 864
hypoplasia of major vessels, 861
necrosis and repair in immature brain, 863
vascular malformations or hamartomas, 861
necrotizing angioptic, 240
pathoanatomical changes in older child, 864
Neuroradiology in diagnosis of childhood stroke, 1008
angiography, 1012
arterial occlusions, 1013
arteriovenous malformations, 1016
cerebral arterial aneurysms, 1016
cerebral embolism, 1015
intracranial venous thrombosis, 1016
plain skull radiographs, 1009
radionuclide studies, 1010
thermography, 1011
ultrasound, 1011
vascular lesions of spinal cord, 1017
Neurosurgical management of strokes in children, 1021
extracranial vascular disorders, 1021
intracranial vascular disorders, 1022
nontraumatic occlusive disorders, 1021
tortuosity, 1022
traumatic occlusive disorders, 1021
intracranial vascular disorders, 1022
arterial occlusive disease, 1022
hemorrhagic disorders, 1023
venous occlusion, 1022
procedures to alleviate chronic disability, 1025
spinal cord disorders, 1024
Neurovascular care units
acute stroke management and patient outcome, 933
Neurovascular examination
evaluation of stroke-suspect patients, 274
indicators of extracranial carotid artery disease, 537
New York City
outcome of stroke at hospital discharge in Blacks, 782
stroke in central Harlem, 406
Norepinephrine
effect of intracarotid, on regional cerebral blood flow, 99
effect on diameter of pial arterioles and pial arteries in cats, 97
effects of adrenergic drugs on cerebral circulation, 50
increased binding by nerves to cerebral blood vessels, 42, 813
intravascular platelet aggregation in heart induced by, 250
North Carolina Comprehensive Stroke Program
organization of, 531

O
Obesity. See Overweight and obesity
Oclusions
alternations in cerebrospinal fluid flow dynamics in cerebrovascular occlusive disease, 91
carotid artery
detecting by thermography, 57
diagnosis by Doppler sonography of ophthalmic artery, 104
EEG and arteriographical findings in TIA, 7
changes in radioisotope cisternogram in cerebrovascular-occlusive disease, 103
in children, 1013
extracranial occlusive disease, 1013
intracranial occlusive disease
in children, 1014
EEG and arteriographical findings in carotid artery TIA, 7
multiple progressive intracranial arterial occlusions, 380
stenosis of internal carotid artery, 1013
Occlusive disease
-treated by enzymatic clot lysis, 478
Occlusive disorders
neurosurgical management in children, 1021
Ocular blood flow
autoregulation of, 707
Ocular fundus
morbidity and survivorship of patients with embolic cholesterol crystals in, 718
Omentum
brain vascularization by intact omentum, 988
Ophthalmic artery
occlusion, ischemic ophthamia secondary to, 261
reversed flow through as cause of rubecis iridis, 485
Ophthalmodynamometry (ODM)
procedures and equipment, 115
Ophthalmological examination
procedures and equipment, 115
Ophthalmoplegia, painful
angiographic findings in, 479
Optic disc vasculitis
in young adults, 487
Optic nerve
involvement in diabetes, 699
Optic neuropathy
nonprogressive glaucoma and, 821
Oral contraceptives
cerebral arterial occlusive disease with telangiectasia associated with, 995
cerebrovascular incidents while taking, 815
effect of blood clotting and platelets, 703
effects on renin-angiotensin system and blood pressure, 819
and increased risk of cerebral ischemia or thrombosis, 987
and platelet function, 717
Orthostatic syndrome
hyperbradydinimia, 475
Overweight and obesity
platelet adhesiveness, coagulation, and fibrinolytic activity, 106
risk factors in coronary heart disease, 99
risk factors in stroke in Mexican patients, 773

INDEX
Oxygen
correlation of regional CBF with regional oxygen uptake using %O method, 102
evidence for direct control of coronary vascular tone by, 712
plasma proteins, oxygen transport and atherosclerosis, 97
post-ischemic oxygen availability and consumption of isolated perfused brain of dogs, 94
rate of turnover in cerebrospinal fluid, 87
Oxygen saturation
blood gases and canine cerebral circulation, 65
Oxygen uptake
effect of pH on metabolism and ultrastructure, 221
Oxygeneation arterial
in central nervous system trauma patients, 999
hyperbaric
blood flow changes in carotid and vertebral arteries by, 823
size of infarct and, 483

P
pH adaptation
CSF changes by hyperventilation in stroke, 620
effect on metabolism and ultrastructure of cerebral cortex slices, 221
lactate in cerebrospinal fluid, 207
Pacing, ventricular
effect on long-term survival, 247
Papaverine
effects in experimental vasospasm, 706
effects of adrenergic drugs on cerebral circulation, 50
ergot alkaloid preparation (Hydergine) versus, in treating aged, 820
Papilloedema
associated with ruptured intracranial aneurysms, 817
Paraformaldehyde technique
increased binding of norepinephrine, 42, 813
Parapharyngeal space
penetrating injuries of, 93
Pathophysiology
research needs, 516
Peltier effect probe
autoregulation and hyperemia of CBF as evaluated by thermal diffusion, 917
Percutaneous puncture
microaneurysms of carotid artery after, 479
Perfusion pressure
clinical effect of hyperventilation in stroke, 568
effect of increased intracranial pressure, 795
effects of alpha adrenergic blockade, 187
physiological responses of cerebral circulation, 632
quantitative evaluation of CBF to perfusion pressure, 712
regional autoregulation in cerebral circulation, 139
regional cerebrovascular CO2 reactivity, blood pressure, and regional resting flow, 725
rCBF during stimulation of seventh cranial nerve, 213
Peritonaeum
autogenous peritonaeum as arterial patch graft, 715
Perivascular osmolarity
effect on diameter of pial arteries, 713
Periventricular atherosclerotic leukoencephalopathy, 257
Periventricular leukomalacia
pathogenesis and evolution in infancy, 94
Permeability
pathophysiology of increased cerebrovascular permeability in acute arterial hypertension, 90
temporary alteration of cerebrovascular permeability to plasma protein during drug-induced seizures, 93
Persantine
for preventing thromboembolism following valve replacement, 100
Phenformin
plus ethyloestrenol in survivors of myocardial infarction: three-year pilot study, 245

Stroke, Vol. 4, November-December 1973
Phenoxybenzamine
- effects of adrenergic drugs on cerebral circulation, 50
Phentolamine
- alpha blocked vasoconstriction, 30
Phlebothrombosis
- residual lesions of infantile cerebral, 707
Physical examinations
- children with strokes, 878, 898
- evaluation of stroke-suspect patients, 274
- lumbar puncture, 122
- procedures and special equipment, 115
- using radiopharmaceuticals, 120
- radiography, 123
Physicians
- current availability of selected specialists, therapists and, 525
Physiological stimulation
- altered cerebral metabolism and blood flow in response to physiological stimulation, 361
Physiology
- research needs, 516
Pial arteries
- effect of epinephrine on diameter of pial arterioles and, in cats, 97
- perivascular potassium and pH as determinants of local pial arterial diameter in cats, 97
- pressures in microcirculation during systemic arterial blood pressure, 95
Pial precapillary vessels
- unresponsiveness to catecholamines and sympathetic nerve stimulation, 97
Plasma renin activity
- in acute cerebrovascular disease, 160
Platelet-fiibrin emboli
- induced by norepinephrine, 250
- induced by stress, 711
- influence of lyssolecithin on, initiated by 5-hydroxytryptamine, 718
- inhibition of ADP-induced, by furosemide, 706
- new technique based on filtration pressure, 709
- relationship of glucose oxygenation to, 707
- suspended in buffered salt solutions, 262
- by vasopressin, 252
AMP inhibition of reactions of ADP with washed platelets, 93
- bleeding time as screening test for evaluation of platelet function, 103
- changes associated with platelet aging, 259
- degradation of discoid, 92
- direct assessment of platelet adhesion to glass, 477
- effect of alpha- and beta-receptor blocking agents on collagen induced release reaction, 105
- effect of glucose on response to release-inducing stimuli, 89
- effect of pyrimidine compounds on, 94, 997
- and fibrinogen consumption in man, 486
- fibrinolysis and hemostasis, 90
- localization of free fatty acids taken up by, 89
- scanning electron microscopic observations in hemostasis, 998
- survival in patients with Beall valve: relation to low incidence of thromboembolism, 91
INDEX
[Phenoxybenzamine-Prostheses]
Polarographical electrodes
- hydrogen clearance technique, 904
Polybrene neutralization
- for monitoring blood heparin levels, 95
Polycythemia
- progressive neurological deficits in primary, 100
Polycythemia vera
- arterial complications of, 996
Polymyalgia rheumatica
- clinical and biopsy findings, 478
Pons
- blood pressure changes in cerebrovascular diseases, 80
Pontine hematoma
- successful evacuation of acute, 96
Pontine lesions
- tracheostomies and stroke, 459
Pontine syndrome
- lateral inferior, 827
Population studies
- cerebral atherosclerosis in European populations, 898
- cerebrovascular and cardiovascular diseases in Japanese fishing villages, 86
- natural history of stroke in Rochester, Minn., 20
- primary SAH in Iceland, 764
- risk factors in stroke in Mexican patients, 773
- TIA's and risk of stroke in elderly, 980
Postganglionic autonomic insufficiency cerebrovascular regulation, 12
Predisposing factors
- in children with stroke, 873
- Preganglionic autonomic insufficiency cerebrovascular regulation, 12
Pregnancy
- in six patients with Starr-Edward prostheses, 248
President's Page
"Teaching Scholars: The Promise of Better Patient Care" (Yu), 492
Pressure-flow relationships
- effects of blood gasses on, in canine cerebral circulation, 65
- lactate in cerebrospinal fluid and, in canine cerebral circulation, 207
Pressures
- differential pressures recorded in actue epidural expanding lesions, 347
- intracranial. See Intracranial pressures
- intracranial pressure and common carotid occlusion, 703
- perfusion. See Perfusion pressure
Prevalence
- natural history of stroke in Rochester, Minn. (1955-69), 20
Procaainamide
- induced systemic lupus erythematosus, 249
Prognosis
- relationship of neurological status and angiographical evidence of spasm to prognosis, 973
- strokes in children, 890
- visual field defects and, 163
Propranolol
- effects on cerebral circulation, 50
- hypertriglyceridermia and, 825
Prostaglandins
- effect on canine cerebral circulation, 356
- effect on carotid arterial blood flow, CSF pressure and intraocular pressure, 706
- experimental vasocostriction of cerebral arteries, 248
- inhibition and reversal of vasospasm induced by, 356
- role in genesis of cerebral vasospasm 248
Prostheses
- autogenization of prostheses for small artery replacement 713
- Beall valve, platelet survival: relation to low incidence of thromboembolism, 91
- heparin-bound aminoethylcellulose as an antithrombogenic surface, 256
- mitral valve: follow-up study, 816
- Starr-Edward cloth-covered composite seat, 820
- long-term evaluation, 256
- pregnancy in six patients, 248
- surface thrombogenicity of, 719

Stroke, Vol. 4, November-December 1973

1073
INDEX

Retinal hemorrhages
and intracranial aneurysms, 105
Retinal ischemic symptoms
in cardiovascular diagnosis, 249
Retinal strokes
incidence of carotid atheromata, 487
Retinal vessels
alterations in experimental hypertension, 95
Rheoencephalography
procedures and equipment, 132
Rheumatoid arthritis
aspirin and MI in, 260
Risk factors
blood coagulation and fibrinolysis in 788 males, 262
clinical study in Mexican patients, 773
clotting and thrombolytic abnormalities, 643
coronary heart disease; overweight and obesity, 99
diabetes and hypertension, 751
strokes in children, 840
TIA as and risk of stroke in elderly, 980
Rochester (Minn.) Study of Stroke
natural history of stroke (1955-69), 20
TIA incidence (1955-69), 816
Rostral superior sagittal sinus
artery of, 993
Rubeosis iridis
reversed flow through ophthalmic artery as cause of, 485
Sagittal sinus
artery of rostral superior sagittal sinus, 993
Doppler ultrasound measurements of superior sagittal sinus blood velocity, 253
Salzburg Conference on Cerebral Vascular Disease
summary of Sixth Conference (1972), 1
Saphenous vein grafts
atherosclerosis and aneurysm formation in, 827
noninvasive technique for determining patency of, 241
Scans and scanning
brain scans in autopsy proved cases of intracerebral hemorrhage, 818
of platelets in hemostasis, 998
Schoenophrinia
rCBF abnormalities in, 353
Scintigraphy
angio-scintigraphy in neurological lesions of vascular origin, 490
arterial peaks in regional cerebral blood flow, 73
procedures and equipment, 120
Screening methods
Atlanta Community High Blood Pressure Program, 240
Screening tests
detecting carotid occlusive disease by thermography, 57
Segmental vascular narrowing
unusual CV changes, 481
Seizures
induced seizures as therapy for experimental stroke in monkeys, 702
Senile dementia
anticoagulant therapy for, 472
Serotonin
ischemic anoxia and cerebral serotonin levels, 105
species difference in carotid dogy response of cat and dog to dopamine and, 476
Sex differences
stroke in Jerusalem district (1960-67), 465
Shy-Drager syndrome
cerebral dysautoregulation in, 820
cerebrovascular regulation in preganglionic and postganglionic autonomic insufficiency, 12
treated with levodopa and MAO inhibitor, 96
Sick sinus syndrome
assessment of sinus node function, 251
Sickle-cell anemia
massive intracranial hemorrhage in, 816
occlusion of large cerebral vessels, 259
strokes in children, 841

Stroke, Vol. 4, November-December 1973

1075
Streptokinase
biochemical evaluation in treatment of AMI, 104
Stress
risk factors in stroke in Mexican patients, 773
Stroke
and blood coagulation, 400
cardiac monitoring of acute stroke patient, 88
in central Harlem, 406
convalescent phase
use of ergot preparation (Hydergine) in, 815
diagnostic procedures, 129
epidemiological study in Jerusalem (1960-67), 465
impaired neurogenic CV control and dysautoregulation
after stroke, 169
latent cerebral venous thrombosis syndrome, 419
natural history of stroke in Rochester, Minn., 20
outcome of stroke at hospital discharge in New York City
Blacks, 782
prognosis
in patients with TIA, 666
visual field defects and, 163
retinal, 487
traqueostomies and, 459
treatment of CVD with clofibrate, 684
on wrong side; use of Doppler ophthalmic test in cerebral
vascular screening, 478
Stroke centers
visual field defects and prognosis of stroke, 163
Stroke prevention
research needs, 516
Stroke programs
establishing local program, 528
example of written procedures for physicians and nurses,
534
North Carolina Comprehensive Stroke Program, 531
Stroke registry
in Göteborg, Sweden, 102
prospective method of studying stroke, 705
Subarachnoid hemorrhages
clinical grade rCBF, and angiographical spasm after
subdural and, 431
delayed arterial spasm following, 704
due to ruptured aneurysms, 242
effect of glycerol and intracarotid phenoxybenzamine after
SAH; ultrastructural study, 987
effect of increased intracranial pressure, 795
EKG changes after, 156, 488
experimental
cerebral hemodynamic and metabolic changes after, 264
delayed changes in cerebral vasomotor reactivity to CO₂ and
autoregulation, 263
effect of glycerol and intracarotid phenoxybenzamine on
cerebral hemodynamics and metabolism, 263
fibrinolytic activity of CSF after SAH, 815
formation of CSF xanthochromia after, 100
life-threatening arrhythmias in, 826
middle cerebral artery embolectomy and vasospasm, 446
monitoring antifibrinolytic therapy, 818
natural history of stroke in Rochester, Minn., 20
primary, in Iceland, 764
pulmonary edema secondary to, 104
regional cerebral blood flow studies, 85
relationship of neurological status and angiographical
evidence of spasm to prognosis, 973
serial changes in acid-base values in blood and CSF, 820
structural changes of intradural arteries following, 701
treatment of cerebral vasospasm with isoproterenol and
lidocaine hydrochloride, 994
“twin” intracranial aneurysms causing, in identical twins,
702
use of antifibrinolytic drugs to prevent early recurrent
aneurysmal SAH, 992
validity of intravenous isotopic technique in CBF studies,
251
ventriculotomy for treatment of actue hydrocephalus
following SAH, 990
Subclavian artery
revascularization, by subcutaneous axillary-axillary graft, 700
Subclavian-carotid bypass
for cerebrovascular insufficiency, 95, 474
Subclavian steal
joint study of extracranial arterial occlusion, 485
Subdural hygroma
following head injury, 703
Superior sagittal sinus blood velocity
Doppler ultrasound measurements, 255
Surgery
aortic valve replacement with Starr-Edwards prosthesis,
820
arterial microautografts, 828
arterial vascular, use of Doppler ultrasonic flowmeter
during, 89
cannulation of jugular bulb, 955
carotid and vertebral artery occlusive disease
physiological monitoring, 487
carotid artery
heparin protection for brain during, 89
carotid bruit; significance in patients undergoing abdomi-
nal aortic operation, 993
carotid endarterectomy
extraluminal, 95
carotid sinus syndrome, 990
carotid-subclavian bypass
effect of peripheral resistance on carotid blood flow
after, 95, 474
carotid thromboendarterectomy
intraoperative arteriography, 991
endarterectomies, 95
EEG and CBF measurements during, 674
of external carotid artery, 993
extracranial-intracranial bypass grafts, 243
intracranial
arterial aneurysms, disturbances of serum electrolytes
after, 96
repeated measurements of cerebral blood flow during, 93
intracranial arterial embolism, 1001
intracranial hemorrhage, 309
medical and surgical management, 273
microsurgical cerebral revascularization
anatomy of middle cerebral artery, 412
neurological status and angiographical evidence of spasm,
973
neurosurgical management of strokes in children, 1021
arterial occlusive disease, 1022
extracranial vascular disorders, 1021
hemorrhagic disorders, 1023
intracranial vascular disorders, 1022
spinal cord disorders, 1024
tortuosity, 1022
traumatic occlusive disorders, 1021
venous occlusion, 1023
physiological monitoring
arterial occlusive disease, 487
postnephrectomy arteriovenous fistula causing "stroke"
and congestive heart failure, 993
prosthetic replacement of mitral valve, 816
research needs, 518
revascularization with autogenous grafts, 814
spinal cord, vascular anomalies of, 99
subclavian-carotid bypass graft for cerebrovascular insuf-
sufficiency, 95
subdural hematomas, 93
TIA and stenotic lesions of neck vessels, 295
traqueostomies and stroke, 459
valve replacement
use of persantine in preventing thromboembolism
following, 100
Survival
outcome of stroke at hospital discharge in New York City
Blacks, 782
stroke in central Harlem, 406
Symposium Abstracts
Cerebral Circulation and Metabolism: Sixth International CBF Symposium, 321
Symposium Abstracts
Cerebral Circulation and Metabolism: Sixth International CBF Symposium, 321
autoregulation, 323
CBF and electrical activity, 339
chemical control, 326
clinical miscellaneous, 352
clinical stroke, 349
diffuse ischemia, 339
focal lesions, 329
increased intracranial pressure and CBF, 345
methodology, 335
neurogenic control, 336
pharmacology and anesthesia, 336
Systemic lupus erythematosus
cyclophosphamide in treatment of, 991
in the elderly, 253
ocular findings in, 821
procainamide-induced, 249
Takayasu's arteritis
total aortography in diagnosis of, 260
Thermal diffusion
autoregulation and hyperemia of CBF as evaluated by, 917
Thermography
detecting carotid occlusive disease by thermography, 57
Thromboembolism
complications during anticoagulant therapy, 89
use with children, 1011
Thrombocytopenia
in children, 842
Thrombocytosis
in children, 842
Thromboembolism
anomalies as risk factor for stroke, 643
Thrombolysis
anomalies in clotting and thrombolysis as risk factors, 643
value of monitoring heparin treatment with activated partial thromboplastin time, 105
Thromboplastic generation test
stroke and blood coagulation, 400
Thrombosis
anatomy of middle cerebral artery, 412
carotid TIA associated with antiplatelet aggregation therapy, 732
cerebral atherosclerosis in Japanese, 768
in child with stroke, 1013
effect of aspirin on, 387
estrogen in treatment of, 987
experimental
and selective in situ lysis by catheter technique, 482
incorporation of 125I-labelled fibrinogen into coronary arterial thrombi in AMI, 702
induced by inversion of arterial branch, 252
induction in guinea pigs by brain tumors, 479
in children, 1016
latent cerebral venous
frequency, relation to age, and congestive heart failure, 419
microcirculatory
relation to thrombus in proximal coronary artery: effect of aspirin, dipyridamole and thrombolysis, 999
stroke and blood coagulation, 400
Thrombosis formation
effect of aspirin on postoperative, 99
massive brain hemorrhages, 946
visual field defects and prognosis of stroke, 163
Tissues
response to arterial substitute of bovine origin, 249
tolerance
neurosurgical management in children, 1022
Thromboplastin generation test
hemorrhage complicating, 826
and stroke, 459
Treating and education
dieticians, 510
Joint Committee report, 499
medical students, 502
nurses, 508
rehabilitation nurse, 509
occupational therapists, 511
overview, 500
physical therapists, 511
physicians, 503
radiologists, 507
urologists, 508
vocational rehabilitation counselors, 512
Torialso-Hunt syndrome
angiographic findings in, 479
Tomography
clinical experience with circular angiotomography, 482
tortuosity
neurosurgical management in children, 1022
Tracheostomies
control of common carotid and innominate artery
and stroke, 459
Training and education
dieticians, 510
Joint Committee report, 499
medical students, 502
nurses, 508
rehabilitation nurse, 509
occupational therapists, 511
overview, 500
physical therapists, 511
physicians, 503
radiologists, 507
urologists, 508
vocational rehabilitation counselors, 512
Transluminal intraarterial clot retrieval
in cardiac dysrhythmia, 711
Transient ischemic attacks
cardiac dysrhythmia and, 899
differences in occurrence of carotid TIA associated with antiplatelet aggregation therapy, 732
effect of aspirin on thrombosis, 387
ECG changes, 999
EEG and arteriographical findings in carotid artery TIAS, 7
extracranial arterial reconstruction for, 995
impaired neurogenic CV control and dysautoregulation after stroke, 169
indicators of extracranial carotid artery disease, 537
medical treatment, 294
monocular TIAS and external carotid artery, 991
prevalence and prognosis in biracial rural community, 1000
prognosis, 666
and risk of stroke in elderly poor population, 980
in Rochester, Minn. (1955-69), 816
and stenotic lesions of neck vessels, 294
surgical treatment, 295
Treatmen of CVD with clofibrate, 684
ulcerated atheromatous plaques of the carotid artery bifurcation, 912

INDEX

Symposium Abstracts—Transient ischemic attacks

1077
Transverse dural sinuses
narrow and atretic, 995

Trauma
crCBF in brain and cervical cord in experimental head trauma, 334
stroke in children, 844
Tumors, cerebral
remitting signs in cerebral mass lesions, 989

U
Ulcerated atheromatous plaques
of carotid artery bifurcation, 912

Ultrasound
Doppler measurements of superior sagittal sinus blood velocity, 255
extracranial vascular disease, 257
procedures and equipment, 129
use of Doppler ultrasonic flowmeter during arterial vascular surgery, 89
use with children, 1011

Ultrastructural studies
disaggregation of polyribosomes in intact gerbils following ischemia, 964
effect of pH on metabolism and, of cerebral cortex slices, 221

Urethan anesthesia
cholinergic control of cortical blood flow, 232

Urokinase
radioactive, for blood clot scanning, 100
therapy: dosage schedules and coagulant side effects, 101

V
Valsalva maneuver
and CBF velocity 247

Vascular resistance
See Cerebral vascular resistance

Vasculitis
stroke in children, 842

Vasoconstriction
absence with hyperventilation in tetraplegic man, 98
of basilar artery, 760
evidence of vasocostrictor sympathetic nerves in brain vessels of mice, 715
middle cerebral artery embolectomy and prolonged widespread vasospasm, 446
modification with hyperventilation in normal man by thymoxamine, 98
sympathetic cerebral vasoconstriction blocked by adrenergic alpha receptor antagonists, 30
sympathetic neural influence on norpinephrine vasoconstriction in brain vessels, 474

Vasodilation
crCBF during stimulation of seventh cranial nerve, 213
effects of intra-hemispheric asthma, 46

Vasomotor nervous control
autoregulation, 742
mechanism of chemical control of cerebral vasomotor activity, 823

Vasoparalysis
clinical effect of hyperventilation in stroke, 568

Vasopressor pathways
electrophysiological studies on organization of, 714

Vasospasm, cerebral
alteration by adrenergic blockade, 255
CBF evaluation of prolonged experimental, 255
middle cerebral artery embolectomy and prolonged widespread vasospasm, 446
reversal of, 1001
role of prostaglandin \(-F_2\) in genesis of, 248
treatment with isoproterenol and lidocaine hydrochloride, 557, 994

Venous occlusion
neurosurgical management in children, 1023
See also Occlusions

Venous outflow
regional autoregulation in cerebral circulation, 139

Ventilation
clinical effect of hyperventilation in stroke, 568

Ventricular drainage
extracranial hemorrhage and, 87

Ventricular pacing
effect on long-term survival, 247

Ventriculography
localization of intraventricular arteriovenous malformations, 814

Venebral artery
bypass anomaly associated with cerebral aneurysm and arteriovenous malformation, 96
extracranial and intracranial structures, 250
giant cell arteritis, 709
obstruction by hyperextension of the neck, 997
post-angiographic vertebral arteriovenous fistulae, 263

Vertebro-basilar arteries
impaired neurogenic cerebrovascular control and dysautoregulation after stroke, 169

Vertigo
prognosis in TIA, 666

Veterans Administration Cooperative Study Group
treatment of CVD with clofibrate, 684
Viquidil
increase in CBF by, 218

Visual field defects
prognosis of stroke and, 163

Volume
cardiovascular dimensions in intracranial arteriovenous malformation, 787
quantitative isotope studies of cerebral vascular volume, 827

Wall/lumen ratio
effects of increased intracranial pressure, 795

Warfarin
interaction of benzodiazepines with, 244
interaction of sodium warfarin and disulfiram, 484
prothrombin levels maintained with meprobamate and, 101
smoking and warfarin dosage, 488

Water areas
clinical and biochemical indicators of CVD among men living in hard and soft water areas, 704

White matter
degeneration in hypoxia, acidosis and edema, 718
hydrogen clearance method in assessment of, 556
physiological responses of cerebral circulation, 632

Women
cryptogenic drop attacks: an affliction of women, 817

Xenon-133
arterial peaks in rCBF, 73
cerebral complications following rCBF measurements, 638

CBF measurements
differences between “81-key and 31-key” decay curves, 364
inhalation technique, 363
in carotid endarterectomy, 363
pitfalls in studies in head-injured patients, 364
quantitating local CBF in 144 subdivisions of human brain, 365
diffusion bypass of xenon in brain circulation, 817
EEG and CBF measurements during carotid endarterectomy, 674
inhalation technique for measuring CBF, 363
regional cerebrovascular CO2 reactivity, blood pressure, and regional resting flow, 725
X-ray fluorescence
effects of arterial blood pressure on rCBF, 390

Young people
multiple progressive intracranial arterial occlusions, 380
occlusion of basilar artery, 258
pathoanatomical changes in older child, 864
Subject Index

*Stroke*. 1973;4:1057-1078
doi: 10.1161/01.STR.4.6.1057

*Stroke* is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 1973 American Heart Association, Inc. All rights reserved.
Print ISSN: 0039-2499. Online ISSN: 1524-4628

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://stroke.ahajournals.org/content/4/6/1057.citation

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in *Stroke* can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to *Stroke* is online at:
http://stroke.ahajournals.org/subscriptions/