AB-519-72
Atheromatous Embolism of the Central Retinal Artery. Secondary Hemorrhagic Glaucoma—Wolter JR (Department of Ophthalmology, University of Michigan Medical Center, Ann Arbor, Michigan 48104), Ryan RW—Arch Ophthal 87:301-304 (Mar) 1972*

Atheromatous embolism of the central retinal artery immediately behind the lamina cribrosa and of one main arteriolar branch of the retina was histologically found as the cause of sudden blindness in one eye of a 74-year-old woman. The main embolus was calcified and contained cholesterol crystal spaces as well as foreign body giant cells. Secondary hemorrhagic glaucoma with rubeosis iridis and angle closure developed subsequently.

AB-520-72
The Pressure Measured in Ophthalmodynamometry—Vander Werff TJ (Department of Mechanical Engineering, Colorado State University, Fort Collins, Colorado 80521)—Arch Ophthal 87:290-292 (Mar) 1972*

The pressure determined in ophthalmodynamometry is not the local pressure in the central retinal artery, but rather the pressure somewhere in the much larger ophthalmic artery. Using a steady flow analysis, this communication mathematically determines (1) the site corresponding to the systolic dynamometric pressure, and (2) the actual central retinal artery pressure before the ophthalmodynamometry was performed. The systolic pressure determined by ophthalmodynamometry is shown to be 14 to 17 mm Hg higher than the normal central retinal artery systolic pressure. The magnitude of this discrepancy is due primarily to the small lumen of the central retinal artery, which produces a very large pressure gradient.

AB-521-72
Histologic Alterations Produced in the Eye by Oxygen at High Pressure—Nichols CW (Institute for Environmental Medicine, University of Pennsylvania Medical Center, Philadelphia, Pennsylvania 19104), Yanoff M, Hall DA, Lambertsen CJ—Arch Ophthal 87:417-421 (Apr) 1972*

Groups of albino guinea pigs were exposed to high concentrations of oxygen at several pressures and the eyes of the animals examined for histological changes both immediately and several months following the exposures. Normal animals as well as animals exposed to conditions of anoxia and hyperbaria were also examined. Ocular changes were observed only in the animals exposed to 100% oxygen at 3 and 5 atmospheres absolute. The primary alterations, which were found to be irreversible over the time of observation, included thinning of the corneal endothelium with darkening and pyknosis of the nuclei, and pyknosis and loss of nuclei from the epithelium of the lens.

AB-522-72
Bilateral Carotid Occlusive Disease. Following Irradiation for Carcinoma of the Vocal Cords—Glick B (Pathology Service, P. O. Box 308, U. S. Army Hospital, Fort Ord, California 93941)—Arch Path 93:352-355 (Apr) 1972*

The case of a 54-year-old woman who developed bilateral carotid occlusive disease 16 years after irradiation for carcinoma of the vocal cord is presented, along with the pertinent literature concerning radiation vascular injury. Evidence indicates that the vascular lesion in this patient's carotid arteries developed as a result of radiation injury. The diagnosis of carotid artery thrombosis should be considered when patients who have received neck irradiation demonstrate symptoms indicative of cerebral vascular insufficiency.

AB-523-72
Platelet Adhesiveness in Patients With Cerebral Vascular Disease—Acheson J (Department of Medicine, Manchester Royal Infirmary, Manchester M13 9WL, England), Danta G, Hutchinson EC—Atherosclerosis 15:123-127 (Jan-Feb) 1972*

In a previous publication it was shown that the level of platelet adhesiveness in a group of patients with focal cerebral vascular disease was higher than in a group of control subjects. In the present study selected clinical factors in the patients were analyzed in terms of platelet adhesiveness values.
ABSTRACTS

The level of platelet adhesiveness bore no relationship to the clinical category (single stroke, multiple strokes, transient vascular insufficiency), morbidity, the presence of ischemic heart disease, the level of initial diastolic blood pressure, the age at onset of cerebral vascular disease, the duration of symptoms and the time between the last stroke and the estimation of platelet adhesiveness. In patients who also had symptoms of peripheral vascular disease, the mean platelet adhesiveness was higher than in the remaining patients.

AB-524-72
Effect of Exercise on Development of Atherosclerosis in Swine—Link RP (Department of Physiology and Pharmacology, College of Veterinary Medicine, University of Illinois, Urbana, Illinois), Pedersoli WM, Safanie AH—Atherosclerosis 15: 107-122 (Jan-Feb) 1972*

Two groups of female and two groups of male miniature pigs (11 per group) were used to study the effect of exercise on the development of atherosclerosis. The pigs were maintained on a diet low in cholesterol and fat until 16 months of age at which time this study was initiated. One pig was randomly selected from each group and necropsied immediately before the study was initiated. The cardiovascular systems were examined for atherosclerosis. None was found.

One group of each sex was trained and conditioned for sustained exercise on a treadmill. When the animals were reasonably well conditioned after three weeks of exercise all groups were fed an atherogenic diet. The trial was of 22 months’ duration.

Feeding the atherogenic ration increased the blood lipids in all groups. However, the differences in the serum cholesterol, triglycerides, total lipids and plasma fibrinogen between the groups of each sex were not significant. Differences between males and females were significant. There were significant differences in the extent of atherosclerosis between the exercised and the non-exercised pigs. Weight of the hearts in relation to body weight was slightly greater in the exercised than in the non-exercised pigs but the differences were not significant. This may have been due partly to the greater amount of fat on hearts from non-exercised pigs. Coronary arteries were also slightly larger in the non-exercised pigs. The exercised pigs consumed more of the diet, gained weight, and less atherosclerosis, and less total body fat than the non-exercised pigs.

AB-525-72
Enzyme Histochimical Observations on the Effect of Pyridinol Carbamate on Cholesterol-Induced Atherosclerosis—Möttönen M (Department of Forensic Medicine, University of Turku, Turku, Finland), Pantio M, Nieminen L—Atherosclerosis 15:77-82 (Jan-Feb) 1972*

The effect of pyridinol carbamate on cholesterol-induced atherosclerosis in the rabbit was investigated in 28 animals. The diet was given for eight months. The effect of pyridinol carbamate on lactate-NAD-tetrazolium reductase and ATPase activities of the abdominal and thoracic aortae was examined histochimically.

The animals were divided into four dietary groups:
1. regular diet (commercial rabbit food pellets, Orion)
2. regular diet + pyridinol carbamate (100 mg/kg)
3. regular diet + cholesterol (1 %)
4. regular diet + cholesterol (1 %) + pyridinol carbamate (100 mg/kg).

Lactate-NAD-tetrazolium reductase and ATPase were identical in the samples taken from the thoracic and abdominal aortae in all groups.

No atherosclerotic formation was noted in dietary groups 1 and 2. Lactate-NAD-tetrazolium reductase and ATPase activities were identical in these two groups.

Pyridinol carbamate was not observed to have any effect on lactate-NAD-tetrazolium reductase and ATPase activities of the aorta and atheroma plaques of the rabbit.

AB-526-72
A Rapid Simplified Prothrombin Assay—Zuck TF (Department of Pathology, Fitzsimons General Hospital, Denver, Colorado 80240), Raymond JM, Dwyre WR—Amer J Clin Path 57:352-358 (Mar) 1972*

A rapid, specific, one-stage assay for prothrombin (SIMA assay) is described. It uses a commercial thromboplastin enriched with bovine factors V and fibrinogen and easily made aged serum. The coefficient of correlation with the specific one-stage assay of Owren is 0.93. It is suggested as a valuable adjunct to the prothrombin time for monitoring patients taking oral anticoagulants. Its rapidity makes it of value in assessing patients with suspected or established consumption coagulopathies. In evaluation of patients with hepatocellular disease the SIMA assay may be preferable to two-stage methods, since it is virtually unaffected by changes in antithrombin-III.
AB-527-72
False-Negative Results in Brain Scanning—Burrows
EH (Consultant Neuroradiologist, Wessex Neuro-
logical Centre, Southampton, England)—Brit Med
J 1:473-476 (Feb 19) 1972*

There were 118 false-negative results in a series
of 847 cases of proved intracranial lesions
subjected to brain scanning. In patients with
neoplasms false-negative results are much more
likely if the site of the tumor is infratentorial or
mediobasal. In patients with stroke the incidence
of false-negative results depends on the stroke-
scan interval.

AB-528-72
The Detection of Stenosis or Occlusion of the Internal
Carotid Artery by Facial Thermography—Lance JW
(Division of Neurology, Prince Henry Hospital,
Little Bay, New South Wales, Australia 2036),
Somerville B—Med J Aust 1:97-100 (Jan 15)
1972*

Facial thermography detects occlusion or severe
stenosis of the internal carotid artery in approxi-
mately 80% of patients by demonstrating a cool
patch on the ipsilateral part of the forehead or
warm spots in areas of collateral circulation. The
technique provides a painless and harmless
method of assessing carotid blood flow before or
after endarterectomy, or of screening an apparent-
tly normal population.

AB-529-72
Akinetic Mutism and Bilateral Anterior Cerebral
Artery Occlusion—Freemon FR (Department of
Neurology, Marquette School of Medicine, Mil-
waukee, Wisconsin)—/Neurol Neurosurg Psy-
chiat 34:693-698 (Dec) 1971*

Three cases of bilateral anterior cerebral artery occlusion are presented with akinetic mutism. The anatomical distribution of the infarction in these patients combined with cases in the literature suggests that this syndrome can have a localizing value for the clinician. If increased intraventricu-
lar pressure is not present, the clinician can suspect a bilateral lesion of cingulate gyrus, medial nuclei of basal ganglia, and/or anterior and reticular nuclei of the thalamus.

AB-530-72
Effect of Intracranial Hypotension on Cerebral Blood
Flow—Salmon JH (Division of Neurosurgery, Uni-
cersity of Cincinnati College of Medicine, Cin-
cinnati, Ohio), Timperman AL—J Neurol Neuro-
surg Psychiat 34:687-692 (Dec) 1971*

Intracranial hypotension increases cerebral blood flow. In dogs the average increase in
cortical blood flow was 30 ml/100 gm/min
(47%) when the intracranial pressure was
lowered acutely from 100 to 40 mm CSF.
Permanent intracranial hypotension was estab-
lished in seven demented patients using a
ventriculoatrial shunt. The mean post shunt
pressure was 50 mm CSF. In this group, the
cerebral vascular resistance decreased 32%, the
cortical blood flow increased 37%, and the
relative weight of functional gray matter increased
44%. The systemic blood pressure was 8% lower.
The increase in cerebral blood flow is the result of an increase in the pressure differential between the precapillary arterioles and the veins. In addition, the vessels dilate in response to the decreased
external pressure. This increase in cerebral blood
flow may be the mechanism for improvement in
patients with normal pressure hydrocephalus who
are shunted.

AB-531-72
Familial Cirsoid Aneurysm of the Scalp—Khodadad
G (Division of Neurosurgery, University of
Pennsylvania School of Medicine, Philadelphia,
Pennsylvania)—J Neurol Neurosurg Psychiat 34:
664-667 (Dec) 1971*

One brother and one sister, of seven siblings,
had cirsoid aneurysms of the occipital scalp with
underlying skull defects and possible intracranial
communication. Another sister had no gross scalp
abnormality but radiographs of the skull revealed
a small occipital bony defect. This is thought to
be the first reported example of familial cirsoid
aneurysm of the scalp.

AB-532-72
Thrombosis of the Internal Carotid Artery Following
Blunt Cervical Trauma—Towne JB (Department of
Surgery, University of Nebraska College of Medi-
cine, Omaha, Nebraska 68105), Neis DD, Smith
JW—Arch Surg 104:565-568 (Apr) 1972*

Four patients suffered thrombosis of the carotid
arterial system due to blunt trauma in the neck.
The neurological symptoms in all developed a few
hours after the injury. Three patients were
operated on. None were improved. Two of them
died, one of whom showed a hemorrhagic
infarction of the brain at autopsy. The fourth
patient was treated without operation and recov-
ered without neurological residuals. Nonoperative
treatment is recommended.

AB-533-72
Long-Term Effects of Hypertension on the Rat Aortic
Wall and Their Relation to Concurrent Aging Changes.
Morphological and Chemical Studies—Wolinsky H
(Departments of Medicine and Pathology and the
Cardiovascular-Pulmonary-Renal Research Unit,
Albert Einstein College of Medicine, Bronx, New
York, Stroke, Vol. 3, September-October 1972
*Authors’ abstract.
The effects of long-term (16 months) hypertension on the thoracic aorta of male rats were compared to previously reported short-term (2.5 months) changes and to concurrent aging changes. Hypertension was produced by clipping a renal artery. Although short-term hypertension was characterized by a disproportionate increase in noncollagenous alkali-soluble proteins, which have been attributed primarily to vascular smooth muscle, with long-term hypertension there was no further increase in these proteins but instead there were striking increases in mural accumulations of elastin and collagen. Chronically elevated wall tension in hypertensive vessels was associated with a progressive increase in wall thickness which resulted in a value for wall stress no different from that of control vessels. Concurrent aging changes were qualitatively similar to, but much less pronounced than, those seen with hypertension and were attributed to an increase in wall tension in controls resulting from a combination of significant increases in diameter and systolic blood pressure with age. This study of the interaction of vessel structure and function has revealed common features of what appears to be a diverse group of vascular alterations.

AB-535-72
Blutgerinnung, insbesondere Thrombocytenumsatz, bei Hyperlipoproteinämien (Blood Coagulation With Special Reference to Platelet Turnover in Hyperlipoproteinemia)—Reimers HJ (Medizinische Kliniken und Polikliniken der Justus Liebig-Universität, D-6300 Giessen, Klinikstr. 32 b, Deutschland), Schmahl FW, Huth K, Lasch HG—Klin Wschr 50:12-20 (Jan 1) 1972 (Springer-Verlag, publisher)*

Platelet turnover and various parameters of blood coagulation were studied in 12 patients with different types of hyperlipoproteinemia and compared with the corresponding values of five healthy male volunteers. Patients with hyperlipoproteinemia exhibited higher blood concentrations of fibrinogen than the healthy subjects. The maximal amplitude in the thrombelastogram was found to be significantly higher in patients with hyperlipoproteinemia, while the recovery of radioactively labeled platelets was significantly lower. All other parameters of blood coagulation studied showed no difference in both groups. An increased turnover of platelets could be found in two patients with type II + IV hyperlipoproteinemia. Four out of seven patients with type IV hyperlipoproteinemia and two out of two patients with type V hyperlipoproteinemia showed increased platelet turnovers, too. In patients with type II + IV, III or IV hyperlipoproteinemia an increased turnover of platelets could only be demonstrated in the presence of some clinical indications of atherosclerosis. On the other hand, platelet turnover was increased in two patients with type V hyperlipoproteinemia, although no indication of atherosclerosis could be found. One of these patients with type V hyperlipoproteinemia was examined during an abdominal crisis. During this period, we not only found increased platelet turnover but also indications of an increased turnover of plasma coagulation factors which can be seen in the early phases of consumption coagulopathy.

*Authors’ abstract.

Stroke, Vol. 3, September-October 1972

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AB-536-72
**Cerebral Cortical Metabolism After Chronic Exposure to Ozone**—Trams EG (Laboratory of Neurochemistry, National Institute of Neurological Diseases and Stroke, National Institutes of Health, Building 10, Room 3D-04, Bethesda, Maryland 20014), Lauter CJ, Brown EAB, Young O—Arch Environ Health 24:153-159 (Mar) 1972*

This study represents a biochemical survey of cerebral cortex in dogs, in which an increased latency of evoked electroencephalogram EEG potentials of visual cortex had been observed after prolonged exposure to ozone. Portions of occipital and parietal cortex were analyzed from 44 dogs which had been exposed to 1 to 3 ppm O₃ for 18 months. Contents of norepinephrine and epinephrine, lipid hydroperoxides, K⁺, Na⁺, and Cl⁻ were measured. In addition, the activity of the following enzymes was determined: monoamine oxidase, catechol-O-methyltransferase, cholinesterase, 5'-nucleotidase, and Na⁺, K⁺, and Mg²⁺ adenosine triphosphatases (ATPases). Catechol-O-methyltransferase activity showed a steady decline as the daily exposure to 1 ppm O₃ was increased from 8 to 24 hours. Concurrently, the catecholamine content of the tissues declined.

AB-537-72
**Consequence of Ligation of the Vertebral Artery**—Shintani A (Department of Neurosurgery, Beth Israel Hospital, Boston, Massachusetts 02215), Zervas NT—J Neurosurg 36:447-450 (Apr) 1972*

A case requiring ligation of the vertebral artery to treat an aneurysm of that vessel is reported. Review of the literature reveals that vertebral artery ligation is far less hazardous than ligation of the carotid artery as long as the opposite vertebral artery is functioning.

AB-538-72
**Compartmental Abnormalities of Regional Cerebral Blood Flow in Children With Head Trauma**—Kasoff SS, Zingesser LH, Shulman K (Departments of Neurological Surgery and Radiology, Albert Einstein College of Medicine, Bronx, New York 10461)—J Neurosurg 36:463-470 (Apr) 1972*

Regional cerebral blood flow (CBF₀) and compartmental analysis in a series of children with closed head injuries have demonstrated abnormalities of both rate and distribution of blood flow. The most frequent derangement was a triphasic flow pattern overlying one or more regions of traumatized brain. The rate of flow in this third compartment is two to five times the rate of normal gray matter flow; while the relative weight of the compartment varies between 3.5% and 15%. The pathophysiology of this third, rapid compartment of flow is discussed, and the argument put forth that such flow does not represent hyperperfusion but rather an ischemia of the gray matter because such blood flow is not available to the tissue for nutrition. If this is so, it may well be a cause of permanent sequelae in the pediatric age group.

AB-539-72
**Extravasation of Angiographic Contrast Material in Hypertensive Intracerebral Hemorrhage**—Kowada M (Division of Surgical Neurology, Research Institute of Brain and Blood Vessels, Akita, Japan), Yamaguchi K, Matsuoka S, Ito Z—J Neurosurg 36:471-473 (Apr) 1972*

Leakage of contrast material during angiography is an uncommon phenomenon in hypertensive intracerebral hemorrhage. Intraparenchymal extravasation was demonstrated in five of 12 patients in whom serial carotid angiography was carried out within five hours of hemorrhage. Extravasated material, first noted in the arterial phase, grew in size and density until the early venous phase and was still visible on the last ten-second film. Three of the four in whom the hematoma was evacuated surgically showed clinical improvement.

AB-540-72

Two cases of intracranial false aneurysm following penetrating orbitofacial wounds are reported. These were the only false aneurysms identified in a series of 2,187 penetrating wounds of the brain from Vietnam. Three similar false aneurysms have been reported previously, and these also were associated with orbitofacial penetration. The unusual incidence of this type of arterial injury secondary to penetrating orbitofacial wounds suggests the value of early arteriographical evaluation.

AB-541-72
**The Frequency and Significance of Coronary Arterial Thrombi and Other Observations in Fatal Acute Myocardial Infarction. A Study of 107 Necropsy Patients**—Roberts WC (Section of Pathology, National Heart and Lung Institute, National Institutes of Health, Bethesda, Maryland 20014), Buja LM—Amer J Med 52:425-443 (Apr) 1972*

Observations made from histological study of the entire extramural coronary arterial tree are

*Authors' abstract.
described in 107 patients who died of acute ischemic heart disease: 74 had transmural left ventricular myocardial infarction, nine had necrosis limited to the inner one-half of the left ventricular myocardium (acute subendocardial infarcts) and 24 died suddenly (less than six hours from onset of symptoms of myocardial ischemia) without histologically detectable myocardial necrosis. Old atherosclerotic plaquing was diffuse and extensive in the extramural coronary arteries in 104 of the 107 patients. The lumens of at least two of the three major extramural coronary arteries (right, left anterior descending and left circumflex) were narrowed more than 75% by old atherosclerotic plaques in 101 of the 107 patients.

Coronary arterial thrombi were found in 40 (54%) of the 74 patients with transmural necrosis, in none of the nine with only subendocardial necrosis and in two (8%) of the 24 who died suddenly. In 37 of the 42 patients with antemortem coronary arterial clots the lumen of the vessel containing the thrombus was already narrowed more than 75% by old atherosclerotic plaques at or distal to the thrombus. The infrequency of coronary thrombi in patients who died of acute cardiovascular collapse without myocardial necrosis, in those in whom necrosis was limited to the subendocardium, in those who died without cardiogenic shock or congestive cardiac failure, and their occurrence at, or proximal to, sites already severely narrowed by old atherosclerotic plaques suggest that coronary thrombi are consequences rather than causes of acute myocardial infarction. The occurrence of components of thrombi, i.e., fibrin and platelets, in old atherosclerotic plaques and the finding of components of old atherosclerotic plaques, i.e., foam cells, cholesterol clefts, pulvaceous debris and calcific deposits, in known thrombi (for example, those located in the left atrium of patients with mitral stenosis) strongly suggest, however, that old atherosclerotic plaques are derived, at least in part, from organization of thrombi.

Patterns of infective endocarditis as seen at autopsy during a five-year interval, 1965 through 1969, were reviewed. The frequency of infective endocarditis was relatively high (47 of 1,881 patients, 2.5%). Failure of clinical recognition of infective endocarditis in 43% of the 47 patients is a major factor in the relatively high mortality of this disease. In 16 of the 47 patients (34%) a prosthetic heart valve was present. Seven of these 16 had active infective endocarditis on a prosthesis which had not been inserted specifically for the treatment of infective endocarditis. All seven patients were receiving usual antibiotic therapy and represent antibiotic treatment failures. In the remaining nine patients, the prosthetic valves had been inserted to correct hemodynamic sequelae secondary to valve deformity following antibiotic therapy of infective endocarditis. In these nine patients, the infection was inactive at the time of autopsy. Valve perforations were present or had been surgically corrected in 22 of the 47 patients (47%). Intractable congestive heart failure was the cause of death in only 8.5% of our series. Thus in our experience infection has replaced congestive heart failure as the most frequent cause of death.

ABSTRACTS

AB-543-72

Angiography in Diagnosis of Ergotism. Report of a Case—Hirsh M, Eger M (Department of Radiology and Vascular Surgery, Negev Central Hospital, Beer Sheva, Israel)—Radiology 103:89-90 (Apr) 1972*

A case of acute peripheral ischemia due to ergotism is described. Diagnosis was based on the angiographical findings which included abrupt narrowing of the arteries at the inguinal level and uniformly narrowed popliteal and femoral arteries with no occlusion; findings consistent with the vasoconstrictive effect of ergotamine. When history and clinical features are inadequate, the radiographical findings will suggest the diagnosis of ergotism.

AB-544-72

Plasma Phospholipids in the Different Types of Primary Hyperlipoproteinemia—Noel C, Marcel YL, Davignon J (Clinical Research Institute, Montreal 130, Quebec, Canada)—J Lab Clin Med 79:611-621 (Apr) 1972*

In order to further assess lipid transport abnormalities in familial hyperlipoproteinemia, lipid phosphorus was measured in plasma phosphatidylethanolamine, phosphatidylcholine, sphingomyelin, and lysophosphatidylcholine fractions separated by thin-layer chromatography in various types of hyperlipoproteinemia. Plasma total cholesterol and triglycerides were measured. Twelve control subjects and 55 hyperlipidemic patients were included in the study. On the basis of the triglyceride/total cholesterol ratio (TG/TC), type II patients were further subdivided into type IIa (TG/TC < 0.40) and type IIb
Patients homozygous for type II (Ilhmz) were also considered as a separate group. In all types of hyperlipoproteinemia (type I excluded) there were significant increases of total phospholipid concentrations, which were caused mainly by significant increases in sphingomyelin and phosphatidylcholine. Only in type I was the absolute concentration of sphingomyelin decreased (p < 0.01) and that of phosphatidylcholine increased (p < 0.01). The relative concentration of sphingomyelin was increased in types IIa (p < 0.001), and Ilhmz, and was decreased in type I (p < 0.01); that of phosphatidylcholine was increased in type I (p < 0.01) and type IV (p < 0.05), and decreased in type IIa (p < 0.05) as compared to controls. Type IIb in contrast to type IIa had a normal pattern of plasma phospholipid fractions and displayed a positive correlation between total cholesterol and lysophosphatidylcholine (r = 0.94). The pattern in types III and V did not differ significantly from the controls; however, only in type V was there a positive correlation between triglycerides and sphingomyelin (r = 0.85) and between total cholesterol and phosphatidylcholine (r = 0.93). In all types a positive correlation was present between total cholesterol and sphingomyelin. This study indicates biochemical heterogeneity within type II and demonstrates further differences in plasma lipids between the various types of hyperlipoproteinemia.

On the basis of 20 halves of autopsied brains and 100 normal vertebral angiograms, the angiographical anatomy of the choroid plexus and superior choroid vein was described. Visualization of the superior choroid vein was good in 97% of cases and of the choroid plexus in 84%. Careful assessment of 30 supratentorial lesions showed superior displacement in thalamic and pineal tumors, while considerable depression was noted with increased intracranial pressure. In addition, a subependymal vein is described, which drains the choroid plexus into the internal cerebral vein.

Shaggy vessels were observed in patients with various brain neoplasms, such as glioblastoma multiforme, astrocytoma, medulloblastoma, metastases, and lymphoma. The vascular aberrations are usually confined to a single artery or group of arteries within the mass. Non-contiguous vessels may be involved when the mass is diffuse. Other lesions which primarily produce shaggy vessels are arteritis and meningitis. In these instances the vascular changes are usually diffuse and not within a mass.

Involvement of the anterior inferior cerebellar artery is the rarest form of posterior fossa aneurysm. A case is presented in which such a lesion was demonstrated angiographically by use of the submental-vertex view.


**ABSTRACTS**

crescent sign in the coronal plane projection. The pathophysiology of these lesions is correlated with the scan findings.

**AB-550-72**
The Prognostic Significance of a Deep-Wedge Pattern in Transverse Section Scanning of Cerebral Infarctions—Manlio FL, Masland WS, Kuhl DE, Staum MM (Departments of Radiology and Neurology, University of Pennsylvania School of Medicine and Hospital, Philadelphia, Pennsylvania)—Radiology 103:135-137 (Apr 1972)

Thirty-five patients with stroke and 11 with brain tumors were evaluated to assess the appearance of the deep-wedge pattern on the cross-section brain scan in relation to other physical findings and prognosis. In patients exhibiting wedge-section patterns, symptom progression best separates tumors from infarcts. In stroke, the pattern results from involvement of the cortex and deeper involvement of underlying white matter. This pattern indicates a patient with severe neurological deficit whose prospect for recovery is poor as compared to stroke patients with other scan patterns.

**AB-551-72**
Increase in Fibrinogen and Fibrin-Related Antigen in Human Serum Due to In Vitro Lysis of Fibrin by Thrombin—Merskey C (Department of Medicine and Unit for Research in Aging, Albert Einstein College of Medicine of Yeshiva University, Bronx, New York 10461), Johnson AJ, Lalezari P—J Clin Invest 51:903-911, 1972

In vitro lysis of fibrin, as indicated by increased fibrinogen-fibrin-related antigen (FR-antigen) in serum, is usually seen when whole blood, or plasma, or highly purified fibrinogen prepared by several different procedures is clotted and kept at temperatures above 0°C. This increase is both time and temperature-dependent, occurs despite the addition of various plasmin and cathepsin inhibitors, and is probably caused by thrombin evolved during clotting and/or added in vitro. In these experiments, the FR-antigen was measured by a sensitive, reproducible hemagglutination inhibition immunoassay adapted to the AutoAnalyzer. Serum from whole blood contained more than serum from plasma, and fibrin rather than fibrinogen proved to be essential for the in vitro lysis. The phenomenon was also caused by Arvin or Reptilase, suggesting that splitting of one or more arginine or lysine bonds in fibrin may be at least partially responsible. To obtain minimal levels of FR-antigen (<0.5 μg/ml), plasma is clotted for four hours at 0°C with 1.0 to 5.0 U/ml thrombin, CaCl₂ (0.0125 mole/liter), and epsilon aminocaproic acid (0.05 mole/liter). Slightly higher levels, probably adequate for clinical diagnosis, are obtained by 10 to 30 minutes' clotting at room temperature. Since endogenous and/or exogenous thrombin is essential for the collection of serum FR-antigen, all the FR-antigen found in normal serum probably results from an irreducible amount of in vitro lysis rather than from continuous intravascular clotting and fibrinolysis.

**AB-552-72**

The diagnosis of epidural hematoma of the posterior cranial fossa often causes difficulties. This is a report of two cases of infratentorial epidural hematomas with almost typical protracted course. In the first patient, a tumor of the right posterior cranial fossa was assumed because no evidence of bone injury was found to account for a craniocerebral lesion revealed in the case history. In the second patient, operation was already indicated because of the neurological findings, the blank radiograph and the brain scintigram. The first patient was free from complaint, the other still had marked neurological defects: a left-sided abducens and facial paralysis, left-sided deafness and vestibular defects.

**AB-553-72**

To answer the question if still fibrously organized thrombi are yet soluble by fibrinolysin, the connective tissue from dura mater cerebri, skin, fatty tissue, skeletal muscles and Achilles tendon was incubated in solutions of various enzymes. While native collagen is degraded by collagenase and denatured collagen by collagenase and trypsin, streptokinase and fibrinolysin have no effect on the solubility of these connective tissues studied.

**AB-554-72**
EEG-Verlaufuntersuchungen nach Carotis-internangiographie (The Course of EEG-Changes Following Arteriography of the Internal-Carotid-Artery)—Girke W (Oberarzt der Psychiatrischen und Neurologischen Klinik und Poliklinik der Freien...
1. Successive EEG investigations were carried out on 22 patients with internal-carotid arteriography, and the type, extent, frequency and duration of post-arteriographical EEG changes were determined.

2. Post-angiographical EEG changes were demonstrated in 19 out of the 22 patients (86.3%), without there being any clinically ascertainable deterioration in the neurological or psychical status.

3. Nine out of the ten patients with normal pre-EEG pictures exhibited changes after angiography, of which six showed basal dysrhythmia and four showed focal disturbances (focal lesions) on the side of the arteriography.

4. Ten of the 12 patients with demonstrable focal disturbances in the EEG prior to angiography exhibited in some cases massive increases in the focal disturbances after arteriography.

5. The post-angiographical EEG changes diminished on the first or at the latest on the third day in those patients with normal pre-EEGs. In the patients with focal disturbances in the pre-EEG the original level was reached on average on the third, or at the latest on the fifth day.

6. The chemotoxic properties of the contrast medium, hemodynamic factors and the nature of the basic illness were found to be important pathogenic factors in the formation of the EEG changes.

ABSTRACTS

AB-557-72
Beta-Trace Protein Concentration in CSF in Neurological Disorders—Link H (Department of Neurology, University Hospital, Lund, Sweden), Olsson J-E—Acta Neurol Scand 48:57-68, 1972*

Beta-trace protein constitutes about 7% of the total cerebrospinal fluid (CSF) protein concentration. In the present study the concentration of beta-trace protein in CSF has been determined in 59 “healthy” controls and in 174 patients suffering from various neurological diseases. The CSF concentration of beta-trace protein was found to increase with age. No statistically significant difference of the CSF beta-trace protein concentration could be found between patients suffering from various neurological diseases and healthy controls, with the exception of patients with cerebrovascular disease, where increased concentrations were found around the fifth week after the onset of the stroke. This increase was especially marked in patients with the most severe signs of a cerebrovascular lesion. Slightly higher CSF beta-trace protein concentrations were found in patients investigated within one month after an exacerbation of multiple sclerosis when compared with multiple sclerosis patients later investigated.

A parallelism between increased concentrations of CSF beta-trace protein and the severity of myelin degradation is postulated.

AB-558-72
Modality Specific Memory Disorders in Man—Patten BM (Medical Neurology Branch, National Institutes of Health, Bethesda, Maryland 20014)—Acta Neurol Scand 48:69-86, 1972*

The results of detailed testing of over 50 patients referred to the memory consultation service of the Neurological Institute indicate the following: 1. Recent memory was impaired more frequently than remote. 2. Defects in remote memory, especially remote memory for impersonal events, were present in over half the patients. 3. In no case was remote memory defective and recent memory spared. In other words, a defect in recent memory was pre-requisite to having a defect in remote memory. 4. The left hemisphere is specialized for recent verbal memory and the right hemisphere is specialized for recent visual memory. 5. Gustatory and olfactory recent memory were much more resistant to the destructive influence of a brain disease than were verbal or visual recent memory. 6. There was some suggestive evidence that the dominant hemisphere is specialized for gustatory memory and the nondominant hemisphere is specialized for olfactory memory. 7. In no case was gustatory memory impaired while verbal was preserved.
other words, a defect in recent verbal memory was pre-requisite to having a defect in gustatory recent memory.

AB-559-72
The Rise Time of Intracranial Echo Pulsations and Intracranial Pressure—Jenkins CO (Department of Neurology, Queen's University Medical School, Kingston, Ontario, Canada), White DN—Acta Neurol Scand 48:115-123, 1972*

It would not appear that measurement of Rise Times of echo pulsations either in amplitude or in range will be useful in determining cases of raised intracranial pressure.

AB-560-72
Ischaemic Heart-Disease in Relation to Fasting Values of Plasma Triglycerides and Cholesterol. Stockholm Prospective Study—Carlson LA (Department of Geriatrics, University of Uppsala, Uppsala #1, Sweden), Böttiger LE—Lancet 1:865-868 (Apr 22) 1972*

In a nine-year follow-up of 3,168 men in the Stockholm prospective study, the occurrence of new events of ischemic heart-disease (I.H.D.) has been related to findings at the initial examination in order to identify risk factors for I.H.D. The rate of I.H.D. increases linearly with increasing fasting concentration of plasma-triglycerides and plasma-cholesterol. Plasma triglycerides and cholesterol are risk factors for I.H.D. independent of each other, and a combined elevation of these two plasma-lipids carries the highest risk for I.H.D. Smoking, but not an increasing weight/height index, is also a significant risk factor for I.H.D.

AB-561-72
Reproducibility in the Hematology Laboratory: One-Stage Prothrombin Times—Bowyer FP, Stratos M, Goldenfarb P, Hall EC (Center for Disease Control, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare, Atlanta, Georgia 30333)—Amer J Clin Path 57:482-486 (Apr) 1972*

The one-stage prothrombin time test was analyzed to study the influence on the total variance of within-run variation and among-run (day) variation over ten nonconsecutive days, difference between fibrometers, and variation among four commercially available thromboplastins. The variation among thromboplastins was found to be a major component of the total variance. Among-run (day) variance, difference between fibrometers, and a thromboplastin-run (day) interaction were each found to be statistically significant, but their influence was relatively small compared with that of thromboplastin variance. These influences were more apparent when a plasma with a prolonged clotting time was used.

AB-562-72

Conventional rapid serial angiography and isotope clearance (intracarotid 133Xe) have been combined in the study of 21 patients with completed strokes and 14 with transient ischemic attacks. Angiography revealed disturbed flow in over half the cases; it correlated reasonably well with the results of isotope clearance, more so in the case of fast flow on angiography with high flow on isotope clearance than in the case of slow flow on angiography with low flow on isotope clearance. The use of isotope studies revealed some areas of flow disturbance not shown by angiography, particularly in cases with transient ischemic attacks. The case for combined angiography and isotope clearance is argued for cases in which flow disturbance is thought likely to be present.

AB-563-72
Correlation of Thermometry and Angiography in Carrotid Arterial Disease. Thermometry as a Screening Technique—Price TR (Department of Neurology, University of Maryland School of Medicine, Baltimore, Maryland 21201), Heck AF—Arch Neurol 26:450-455 (May) 1972*

Direct thermistor thermometry recordings of skin temperature of the forehead were compared with angiographical findings in 100 patients. The results further define the usefulness of this technique in evaluating patients and in population group screening. Medial supraorbital temperature differences of 1.0°F or greater were always associated with internal or common carotid occlusion or stenosis greater than 50%. With values from 0.5° to 0.9°F, 46% of patients had significant carotid lesions and with values less than 0.5°F, 16% had significant carotid lesions.

AB-564-72
Fenestration of the Vertebral Artery With a Review of 23 Cases in Japan—Kowada M, Yamaguchi K, Takahashi H (Division of Surgical Neurology and Radiology, Research Institute of Brain and Blood Vessels, Akita, Japan)—Radiology 103:343-345 (May) 1972*
Seven cases of angiographically demonstrated vertebral artery fenestration are presented, and 23 cases are reviewed. In the seven cases described, fenestration occurred at the level of the atlantoaxial junction, on the left side in five cases, and on the right in two. Fenestration or partial duplication of the vertebral artery is considered to be an anastomosis anomaly occurring during embryological development. This anomaly is frequently associated with other congenital intracranial and extracranial vascular abnormalities including aneurysms and arteriovenous malformations.

**AB-565-72**

The Choroidal and Nodular Branches of the Posterior Inferior Cerebellar Artery. Their Value in the Diagnosis of Medulloblastomas—Takahashi M, Okudera T, Fukui M, Kitamura K (Departments of Radiology and Neurosurgery, Kyushu University School of Medicine, Fukuoka, Japan)—Radiology 103:347-351 (May) 1972*

Radiographs of ten autopsy specimens demonstrated anatomy of choroidal and nodular branches of the posterior inferior cerebellar artery. The nodular branches with posterior displacement, as seen in 5 of 12 medulloblastomas, were of diagnostic value in tumors originating in or invading the inferior vermis. Choroidal branches were enlarged in three medulloblastomas and one choroid plexus papilloma, suggesting considerable significance in diagnosis of fourth ventricle tumors. These arterial branches were not definitely visualized in 60 normal vertebral angiograms nor in another 60 cases with other intracranial expanding lesions.

**AB-566-72**

Persistent Carotid-Superior Cerebellar Artery Anastomosis: A Variant of Persistent Trigeminal Artery—Teal JS, Rumbaugh CL, Bergeron RT, Scanlan RL, Segall HD (Departments of Radiology and Neuroradiology, Los Angeles County-University of Southern California Medical Center, Los Angeles, California)—Radiology 103:335-341 (May) 1972*

The embryology and anatomy of the trigeminal artery was reviewed, and one case of persistent carotid-superior cerebellar artery anastomosis without an interposed segment of basilar artery is demonstrated angiographically. This anomaly apparently has not been reported previously, either angiographically or anatomically. An embryological explanation for this anomalous anastomosis is proposed. Two more typical presentations of persistent trigeminal artery are also included.

**AB-567-72**

Angiographic Manifestations of Craniofacial Phycomycosis. Report of 3 Cases—Courrey WR, New PFJ, Price DL (Departments of Radiology and Neuropathology, Massachusetts General Hospital and Harvard Medical School, Boston, Massachusetts)—Radiology 103:329-334 (May) 1972*

Three cases of craniofacial phycomycosis evaluated by carotid angiography are reported. The major angiographical findings were thrombosis capable of producing stenosis or complete occlusion, aneurysm formation, embolism, and brain infarction. The disease usually affects severely debilitated patients (notably poorly controlled diabetics) and typically presents as sinusitis progressing promptly to meningoencephalitis. Plain films usually reveal inflammatory involvement of multiple sinuses, often a pharyngeal mass, as well as bone destruction if the condition is relatively advanced.

**AB-568-72**

Dextrose and Sorbitol as Diluents for Continuous Intravenous Heparin Infusion—Chessells JM, Braithwaite TA, Chamberlain DA (Royal Sussex County Hospital, Brighton)—Brit Med J 2:81-82 (Apr 8) 1972*

A comparison of 5% dextrose and 5% sorbitol as diluents for heparin given by continuous intravenous infusion indicated that neither impaired the potency of the heparin. Previous suggestions that heparin becomes unstable in dextrose solution have not been confirmed.

**AB-569-72**

Epidemiology of Sudden Death—Kuller L (Department of Epidemiology, Johns Hopkins University, School of Hygiene and Public Health, Maryland Medical-Legal Foundation, Baltimore, Maryland 21205), Cooper M, Perper J—Arch Int Med 129: 714-719 (May) 1972*

A clinical-epidemiological and pathological study of sudden death in a defined area of Baltimore was begun in June 1970. The background characteristics of the deaths, prodromal symptomatology and factors associated with the onset are being studied. For most of the deaths certified by the Medical Examiner a detailed postmortem examination was performed. Approximately two-thirds of the arteriosclerotic heart disease (ASHD) deaths were sudden and only 26% occurred in a hospital. Sudden death patients are characterized as having a high frequency of prior heart disease, hypertension, and diabetes, recent medical care, and many prodromal symptoms. The onset is usually at home or work and rarely associated with an obvious acute precipitating event. There is considerable patient delay at onset but rarely

*Authors' abstract.
ABSTRACTS

physician delay. At postmortem examination sudden ASHD deaths have severe atherosclerosis which involves three or four vessels and is diffuse. Acute lesions are relatively rare.

AB-570-72
Orbital Venography—Russell DB, Miller JDR (Department of Radiology, University of Alberta Hospital, Edmonton, Alta., Canada)—Radiology 103:267-273 (May) 1972*

A discussion of the anatomy of the orbital veins is followed by a description of the percutaneous frontal vein puncture method of orbital venography. Abnormal roentgen findings in a series of 21 cases are categorized into five groups: obstruction, attenuation, venous malformation, displacement, and cavernous visualization. The 21 cases included neoplasms, orbital infection, endocrine exophthalms, cavernous sinus studies, and venous malformations.

AB-571-72
Fibrinogen Turnover in Rats as a Function of Age—Nadelhaft I (Veterans Administration Hospital, Leech Farm Road, Pittsburgh, Pennsylvania 15206), Lamy F—J Lab Clin Med 79:724-730 (May) 1972*

We have measured the turnover of fibrinogen in Wistar male rats as a function of their age. Three groups were examined; young (three and one-half months), adult (13 months), and old (25 months). A two-component model of fibrinogen balance was applied to the data and used to determine the catabolic rate (assumed equal to the rate of synthesis), and the vascular to extravascular ratio of fibrinogen. C14-labeled fibrinogen, made in a donor animal by intravenous injection of labeled amino acid, was harvested, purified, and injected intravenously into experimental animals. Samples of blood taken from the tail veins every day were processed and the plasma clotted with thrombin. The clots were solubilized and counted in a liquid scintillant. The turnover rate expressed as half-life in hours is: young: 30.8 ± 1.3; adult: 39.8 ± 1.8; old: 41.0 ± 1.8. The synthesis rate in units of percent per day is: young: 101 to 120; adult: 62 to 72; and old: 50 to 55.

AB-572-72
Fibrinogen Turnover: Demonstration of Multiple Pathways of Catabolism—Sherman LA (Department of Medicine, Jewish Hospital of St. Louis, St. Louis, Missouri 63110)—J Lab Clin Med 79:710-723 (May) 1972*

Studies have been conducted to identify early in vivo products of normal fibrinogen catabolism, focusing on two normal variants: (1) the high solubility, low molecular weight (269,000) fibrinogen (LMWF) of Mosesson and co-workers and (2) the cryofibrinogen/fibrin complex (cryoprofibrin) characterized by Shainoff and Page. In normal rabbits, LMWF has been demonstrated to be derived in vivo from the low solubility, high molecular weight fibrinogen (HMWF) which is the bulk of the plasma pool. In the present study, 125I-HMWF was injected into normal rabbits and the gradual appearance of radioactivity noted not only in the LMWF, but also in cryoprofibrin. By day 2 the specific activity of cryoprofibrin equaled that of HMWF, and by day 3 the specific activity of LMWF equaled that of HMWF. Thereafter, the specific activities of cryoprofibrin and LMWF slightly exceeded that of HMWF. The HMWF half-life was 47 hours, and total fibrinogen half-life was 63.4 hours. In separate experiments, the t½ of 125I-LMWF and 125I-cryoprofibrin were 26.4 and 13 hours, respectively. These studies support a concept of several normal catabolic pathways for fibrinogen (1) by low grade proteolysis to LMWF and (2) limited, partial, soluble, fibrin formation (cryoprofibrin). There is indirect evidence to suggest these processes also occur in man.

4. AB-573-72
Hypertensive Encephalopothy—Finnerty FA Jr (Georgetown University Medical Division, District of Columbia General Hospital, Washington, D.C. 20003)—Amer J Med 52:672-678 (May) 1972*

Hypertensive encephalopathy is a syndrome consisting of a sudden elevation of arterial pressure usually preceded by severe headache and followed by convulsions, coma or a variety of transitory cerebral phenomena. The syndrome may complicate acute glomerulonephritis, toxemia of pregnancy and essential or mild hypertension. Two syndromes must be differentiated from true hypertensive encephalopathy: (1) acute anxiety state with labile hypertension and (2) acute pulmonary edema due to hypertensive heart disease. Despite extremely high levels of arterial pressure in both these disease states, the use of antihypertensive agents is usually not indicated, at
least in the patients with acute anxiety state. If morphine, digitalis, diuretics and tourniquets are not immediately successful in reducing the arterial pressure in patients with acute pulmonary edema, acute reduction of the arterial pressure is most assuredly indicated.

From the practical standpoint, the drug chosen to reduce the arterial pressure depends on the clinical condition of the patient, particularly on the degree of cerebral ischemia present. If the condition of the patient is such that a one and a half to two hour delay in reducing the arterial pressure would not be harmful, parenteral administration of reserpine is the treatment of choice. If immediate reduction in arterial pressure is necessary, intravenous diazoxide is the treatment of choice. Since reduction in arterial pressure with both of these agents is associated with sodium retention it is important to administer furosemide concomitantly. Furosemide is administered in that dosage which will ensure a 24 hour urinary output above 1.5 L.

AB-574-72
Traumatic Aneurysms of the Cerebral Vessels—Acosta C (Department of Surgery, Division of Neurosurgery, The University of Texas [Southwestern] Medical School, Dallas, Texas), Williams PE Jr, Clark K—*J Neurosurg 36:531-536 (May) 1972*

Four cases of traumatic intracranial aneurysms are presented and the pathology and pathophysiology discussed. Two were successfully treated by direct surgical attack. The diagnosis of traumatic aneurysm should be suspected when a patient has an episode of intracranial hemorrhage after a head injury. The outcome of bleeding episodes is fatal in a significant number of cases. Surgery to obliterate the aneurysm is the treatment of choice.

AB-575-72
Intracranial Pressure in Patients With Ruptured Saccular Aneurysm—Nornes H (Neurosurgical Department, Oslo University Hospital, Rikshospitalet, Oslo, Norway), Magnus B—*J Neurosurg 36:537-547 (May) 1972*

Intracranial pressure was recorded in 21 patients with subarachnoid hemorrhage due to rupture of a saccular aneurysm. Two different pressure patterns were found in nine patients who had verified recurrent hemorrhages while awaiting clinical improvement. One was associated with massive hematoma while the other occurred with edema but only minimal hematoma; the terms "hemorrhagic-compressive lesion" and "ischemic-edematous lesion" have been used for these two conditions. Four patients showed transient deterioration concomitant with marked pressure peaks in the continuous record. Although there was no evidence of fresh hemorrhage, three of these episodes were followed by a verified hemorrhage within 24 hours. Since no such "warning episode" was seen after the aneurysm had been clipped, the authors consider this pressure peak and concomitant clinical deterioration to be related to the mechanism of aneurysm rupture and possibly a forerunner of a life-threatening hemorrhage. These three pressure patterns showed the whole range from full spatial compensation to total decompensation. The determining factors are considered to be the volume of extravasated blood, the vasomotor reaction, and the intracranial spatial buffering capacity.

AB-576-72
Intracranial Mycotic Aneurysms of Extravascular Origin—Suwanwela C (Chulalongkorn Hospital and Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand), Suwanwela N, Charuchinda S, Hongsaprabhas C—*J Neurosurg 36:552-559 (May) 1972*

Six patients with intracranial mycotic aneurysms of extravascular origin are reported. Four had aneurysms of the intracavernous portion of the internal carotid artery associated with thrombophlebitis of the cavernous sinus, and two had aneurysms of the cerebral arteries associated with meningitis. An aneurysm of this type may rupture, producing subarachnoid hemorrhage, or it may become thrombosed and decrease in size or spontaneously disappear. In some patients it may persist and develop calcification in the wall.

AB-577-72
Aneurysm-Induced Third Nerve Palsy—Raja IA (The Regional Neurological Centre, General Hospital, Newcastle Upon Tyne, England)—*J Neurosurg 36:548-551 (May) 1972*

Forty-two patients with aneurysm-induced third nerve palsies are described. After carotid ligation, 58% showed satisfactory and 42% unsatisfactory functional recovery. In some patients the deficit continued to increase even after carotid ligation. Early ligation provided a better chance of recovery of third nerve function. Patients in whom third nerve palsy began after subarachnoid hemorrhage had a poor prognosis. No relationship was noted between the size of the aneurysm and the recovery of third nerve function.

AB-578-72
Direct Measurement of Mean and Pulsatile Blood Pressure at Operation in Human Intracranial Saccular Aneurysms—Ferguson GG (Departments of Biophysics and Clinical Neurological Sciences, Faculty of Medicine, University of Western Ontario, Stroke, Vol. 3, September-October 1972

*Authors' abstract.
ABSTRACTS

London, Ontario, Canada—*J Neurosurg* 36:560-563 (May) 1972*<sup>1</sup>

Mean and pulsatile intra-aneurysmal blood pressures were recorded from four cases of human intracranial saccular aneurysms at the time of operative exposure. In each case the mean intra-aneurysmal pressure equalled the mean systemic arterial pressure, and the intra-aneurysmal pressure was pulsatile. The results demonstrate that, contrary to the findings of another report, intracranial aneurysms are subjected to the full force of systemic blood pressure.

**AB-579-72**

Relation of Preoperative Angiographic Characteristics of the Posterior Communicating Artery to the Results of Common Carotid Ligation—Tuerk K (Department of Neurosurgery, Kaiser Foundation Hospital, Redwood City, California 94063), Chase NE, Kricheff II, Lin JP, Ransohoff J—*J Neurosurg* 36:564-568 (May) 1972*<sup>1</sup>

Twenty patients with posterior communicating artery aneurysms were treated with common carotid ligation. Postligation visualization was accomplished in 16 cases by ipsilateral brachial angiography. Two other aneurysms were visualized by contralateral brachial and contralateral carotid angiography. The size of the aneurysm was measured before and after ligation. The relationship of postoperative reduction in size to preoperative angiographic characteristics was studied. Reduction in the size of the aneurysm occurred most often when preoperative angiography showed that the sac was long and its neck narrow, and when there was stasis of contrast material in the aneurysm.

**AB-580-72**

Effect of Experimental Brain Injury on Blood Pressure, Cerebral Sinus Pressure, Cerebral Venous Oxygen Tension, Respiration, and Acid-Base Balance—Kaste M, Troupp H (Neurosurgical Clinic, Topeliusgatan 5, 00260 Helsinki, Finland)—*J Neurosurg* 36:625-633 (May) 1972*<sup>1</sup>

Changes in the blood pressure, cerebral sinus pressure, cerebral venous oxygen tension, acid-base balance, respiratory frequency, and respiratory minute volume were studied in the rabbit after a lethal cold injury to the brain. About half of the animals responded to the injury with a quick rise in cerebral sinus pressure and in its relation to blood pressure (CSP/BP); in the other half, cerebral sinus pressure and the CSP/BP ratio rose more slowly. Changes in the CSP/BP ratio correlated well with criteria for changes in respiratory performance. The changes in cerebral venous oxygen tension were reasonably uniform: a dip during freezing, an overshoot to a mean of 1.6 times the original level (about 30 mm Hg) immediately after injury, a gradual return to the pretraumatic level, and then a drop to lower levels. The brain injury led to a respiratory alkalosis that became more pronounced the longer the animals lived. Considered with CSP/BP ratio, respiratory reaction to the brain injury may provide an early and accurate prognosis. The fact that at the time of death the cerebral perfusion pressure was still within a range believed safe for the brain shows that an actual brain injury, in addition to raised intracranial pressure, is important in such experiments and emphasizes the inappropriateness of comparing levels of intracranial pressure raised by a variety of methods.

**AB-581-72**

Effects of Prostaglandin E<sub>1</sub> on Experimental Cerebral Vasospasm—Pelofsky S (Department of Neurosurgery, University of Oklahoma Medical Center, Oklahoma City, Oklahoma 73104), Jacobson ED, Fisher RG—*J Neurosurg* 36:634-639 (May) 1972*<sup>1</sup>

This study reports the effects of intra-arterial prostaglandin E<sub>1</sub> (PGE<sub>1</sub>) upon intracerebral blood flow under control and vasospastic conditions. A new transorbital means of producing acute experimental subarachnoid hemorrhage with concomitant arterial spasm is presented. Two groups of animals were delineated in this investigation. Five animals (Group 1) were extremely sensitive to PGE<sub>1</sub> and subarachnoid hemorrhage (SAH); carotid flow studies with simultaneous intracerebral angiography in this group demonstrated the ability of PGE<sub>1</sub> to relieve vasospasm. Two other animals (Group 2) were relatively insensitive to SAH and PGE<sub>1</sub>. The study suggests an important role for PGE<sub>1</sub> in the treatment of intracerebral vasospasm.

**AB-582-72**

Preoperative Management of Patients With Ruptured Intracranial Aneurysms—Ransohoff J (Departments of Neurosurgery and Neurology, New York University Medical Center, New York, New York 10016), Goodgold A, Benjamin MV—*J Neurosurg* 36:525-530 (May) 1972*<sup>1</sup>

The authors report their experience with the use of an antifibrinolytic agent and hypotensive drugs in the prevention of rebleeding from recently ruptured intracranial aneurysms and conclude that both measures are of suggestive value. With further refinement in these techniques an additional reduction of early rebleeding may be expected. Secondary cerebral vasospasm remains the major obstacle to early recovery and definitive surgery for ruptured intracranial aneurysms.
AB-583-72
Effects of Arvin on Blood Platelets. In Vitro and In Vivo Studies—Brown CH III (The Johns Hopkins Hospital, Baltimore, Maryland 21205), Bel WR, Shreiner DP, Jackson DP—J Lab Clin Med 79: 758-769 (May) 1972*

The in vitro effect on human platelets of arvin and thrombin, two enzymes which clot fibrinogen, have been compared. In vivo platelet survival in rabbits receiving arvin also was studied. Arvin, like thrombin, clotted platelet fibrinogen. Arvin, unlike thrombin, did not cause release of potassium, serotonin, ADP (adenosine diphosphate) or ATP (adenosine triphosphate) from platelets. In the presence of calcium, thrombin induced rapid aggregation of platelets, but arvin induced only minimal and delayed aggregation. Human platelets pre-incubated with arvin aggregated following the subsequent addition of thrombin and calcium, and supported retraction of thrombin-induced clots. The platelet counts and life span of platelets in rabbits defibrinogenated by the administration of arvin were normal. The studies suggest that if platelet fibrinogen is the principal substrate for the action of thrombin on platelets, more complete hydrolysis of platelet fibrinogen than that which follows exposure of platelets to arvin must occur; alternatively, hydrolysis of other proteins which are unaffected by arvin may be involved. Normal in vivo survival of platelets in animals treated with arvin is evidence that defibrinogenation can be produced without the hazard of thrombocytopenia, information which may be significant when considering arvin-induced therapeutic defibrinogenation of human subjects.

AB-584-72
Responses of Blood Vessels to Various Amines Applied by Microiontophoresis—Stone TW (Department of Physiology, University of Aberdeen, Marischal College, Aberdeen AB9 1AS, United Kingdom)—J Pharm Pharmacol 24:318-323 (Apr) 1972*

Various amines have been applied to arterioles of the rat intestine and mesentery by microiontophoresis. Noradrenaline produced a profound constriction with a long latency and time course. This effect was prevented by phentolamine but not by propranolol. Histamine caused a partial relaxation of noradrenaline-constricted vessels, but had no apparent action on "normal" vessels. Acetylcholine and methacholine had no apparent effect on the vessels. The results are discussed in relation to previous findings. It is suggested that the effects of microiontophoretically applied amines on blood vessels may be of importance in studies of the actions of these substances in the central nervous system using this technique.

AB-585-72
Myocardial Infarction in Patients With Normal Patent Coronary Arteries as Visualized by Cineangiocardiography—Kimbiris D (Hahnemann Medical College and Hospital, Philadelphia, Pennsylvania 19102), Segal BL, Munir M, Katz M, Likoff W—Amer J Cardiol 29:724-728 (May) 1972*

Myocardial infarction with normal coronary arteriographical findings is rare. Three patients are presented who had typical clinical and laboratory findings of acute myocardial infarction and normal coronary arteriograms. Two patients were male, 16 and 24 years old, respectively, and one was female, aged 36 years. None had major predisposing factors to precocious coronary atherosclerosis. Thrombocytosis was considered to be the etiologic factor in one male patient; no etiological factor could be traced in the other male patient; estrogen therapy may be considered as the cause of the myocardial infarction in the female patient.

AB-586-72
The Study on Phospholipid Structure in Arterial Walls—Homm Y, Nakamura H, Goto Y (Department of Medicine, Keio University School of Medicine, 35 Shinanomachi, Shinjuku-ku, Tokyo, Japan)—Jap Heart J 13:43-52 (Jun) 1972*

Fatty acids attached to β-position of phosphatidylethanolamine (PEA) and phosphatidylethanolamine (PEA) in the intima, media and atherosclerotic plaque of human arterial wall were splitted by phospholipase A and fatty acid compositions at α- and β-position of PC and PEA were measured. From these data, their molecular distributions were calculated. Results were as follows: (1) The heterogeneity of fatty acid moiety in α- and β-positions of PC and PEA in the intima, media and atherosclerotic plaque was present. (2) Major molecules of PC were dipalmitoyl-PC, 1-palmito-2-oleoyl-PC and 1-palmito-2-oleoyl-PC and 1-palmito-2-oleoyl-PC in the intima, dipalmitoyl-PC and 1-palmito-2-oleoyl-PC in the atherosclerotic plaque and 1-palmito-2-oleoyl-PC, 1-stea-ro-2-oleoyl-PC, 1-palmito-2-linoleoyl-PC and dipalmitoyl-PC in the media. (3) Major molecules of PEA were 1-stea-ro-2-palmitoyl-PEA in the intima, 1-stea-ro-2-palmitoyl PEA and dipalmitoyl-PEA in the atherosclerotic plaque and 1-stea-ro-2-arachidionyl-PEA in the media. (4) Disaturated PC and PEA were found comparatively rich in the atherosclerotic plaque.

AB-587-72
Pyridinolcarbamate in the Treatment of Ischemic Heart Diseases. A Double Blind Study—Guzman SV

Stroke, Vol. 3, September-October 1972
ABSTRACTS

(University of the Philippines) — Jap Heart J 13: 53-58 (Jan) 1972

Thirty-four out-patients with electrocardiographical evidence of ischemic heart disease were divided into two groups, each group comprised of patients closely matched as to variables of sex, age, severity of symptoms and ECG findings. One group received pyridinolcarbamate, 1,500 mg in three divided doses, while the other group received a placebo. The response to the therapy in each group was evaluated on the basis of (a) physical work capacity (PWC), (b) nitroglycerine requirement, and (c) electrocardiogram. The group that received pyridinolcarbamate showed a statistically significant (p < 0.025) favorable response in the three parameters evaluated (PWC, nitroglycerine requirement and ECG) compared to the placebo group. The possible mechanism of action of the agent is discussed.

Le Plethysmogramme D'Impedance Comme Indice de L'Hemodynamique Cerebrale Chez le Chat. Relations Avec la Vigilance — Lecas J-C (Laboratory of Psychophysiology, Centre National de la Recherche Scientifique, ERA 190, Université de Lille I, 59 Villeneuve d'Ascq, France) — Electroenceph Clin Neurophysiol 32:485-497 (May) 1972

Hypercapnia, reticular and sensory stimulation, I.V. injection of epinephrine, intracranial hypertension and general hypotension are capable of producing impedance increments in the rheoencephalogram (REGc) of cats. A high correlation exists between the rheographical curves and intracranial pressure, and it is assumed that the REGc is an impedance plethysmogram. Brain stem sectioning at midpontine level allowed stimulation of the isolated mesencephalic reticular system which continued to produce REGc responses. This reactivity suggests that neurogenic control is not involved in REGc-monitored vasodilatations. Metabolic changes are most likely responsible for the REGc shifts.

Proseopagnosia and Facial Discrimination — Benton AL, Van Allen MW (Neurosensory Center and Departments of Neurology and Psychology, University of Iowa, Iowa City, Iowa) — J Neurol Sci 15:167-172 (Feb) 1972

A 24-year-old patient with encephalitis developed an inability to recognize familiar faces (prosopagnosia). The relationship between this disorder and the ability to discriminate unfamiliar faces is discussed. Since this patient was able to discriminate unfamiliar faces, prosopagnosia cannot be explained entirely in terms of general visuoperceptual impairment. The ability to discriminate unfamiliar faces has been attributed to a function of the right hemisphere previously.


Prostaglandin E<sub>2</sub> added to platelet-rich plasma from normal donors produced a disaggregation of the first phase of platelet aggregation but, contrary to prostaglandin E<sub>1</sub> (PGE), the aggregation in the second phase was enhanced. PGE<sub>2</sub> may have a regulatory effect on the second phase of platelet aggregation, a phase normally inhibited by aspirin. It has been shown that PGE<sub>2</sub> is formed by and released from human platelets and synthesis of PGE<sub>2</sub> can be inhibited by aspirin. The effects of PGE<sub>2</sub> on platelet aggregation should be given consideration since the prostaglandins are being employed in more clinical situations (abortions, nasal decongestion, etc.).

Platelet Adhesiveness in Symptomatic Women Taking Oral Contraceptives — Zuck TF, Bergin JJ, Raymond JM, Dwyre WR, Corby DG (Departments of Pathology, Medicine and Clinical Research Service, Fitzsimons General Hospital, Denver, Colorado 80240) — Thrombosis 26:426-430, 1971

Four groups of women were evaluated to determine platelet adhesiveness. Only those women taking oral contraceptives who had significant symptoms (headache plus transient blindness or severe blurring of vision, paresthesias, frank cerebral thromboses, deep venous thrombosis) had significant increases in their platelet adhesiveness compared to the control group. Those asymptomatic women taking oral contraceptives failed to have a significant increase in platelet adhesiveness. There was an increase in platelet adhesiveness in the group of pregnant women but the numbers of patients were too small to be significant.
A group of 244 physicians in the San Diego community were interviewed to determine the amount of their practice devoted to stroke, heart disease, and cancer. Although 50% of the physicians interviewed saw some stroke patients, this group of patients was a smaller component of most practices than heart disease or cancer. Internists reported that stroke and heart disease made up 40% of their practices. Strokes accounted for 4% to 6% of all patients seen by the doctors interviewed; on observation, however, strokes comprised 1.2% of the patients seen by these physicians. Of all physicians interviewed, 20% of all the patients seen fell into the above three categories.

AB-593-72
**Effect of Ileal Bypass on Cholesterol Levels, Atherosclerosis and Growth in the Infant Rabbit**—Buchwald H (Department of Surgery, University of Minnesota Hospitals, Minneapolis, Minnesota 55455); Moore RB, Bertish J, Varco RL—*Ann Surg* 175:311-319 (Mar) 1972

The effects of dietary cholesterol and ileal bypass have been studied in five groups of infant rabbits. In the control group fed 2% cholesterol-enriched diets, atherosclerosis and hypercholesterolemia developed by the second month of feeding with death occurring at 4.3 months. If ileal bypass is instituted in the five-week-old rabbit, blood cholesterol and atherosclerosis can be reduced when the rabbits are placed on the same 2% cholesterol-enriched diet and cholesterol can be reduced below the control level in those fed a regular diet. In rabbits already hypercholesterolemic and atherosclerotic, ileal bypass reduces blood cholesterol despite continued feeding of the enriched diet and the proliferative plaque evolves to a scarring or healing phase.

AB-594-72
**EEG in Transient Ischemic Attacks**—Mizuno Y, Hughes JR (Department of Neurology, Northwestern University Medical Center, Chicago, Illinois 60611)—*Dis Nerv Sys* 33:126-135 (Feb) 1972

Electroencephalograms (EEGs) of 150 patients with transient ischemic attacks (TIAs) revealed epileptiform discharges in 39.7%, which was significantly higher than the control group (17.8%) and the acute stroke group (23.6%). Most of the discharges were localized to the temporal lobe in the TIA group. Females more frequently had epileptiform discharges in the TIA and acute stroke groups, and 50 to 69 years old was the most frequent age range of patients with TIAs. These findings indicate that patients with TIAs are predisposed to the development of epileptiform activity in the temporal lobe.

AB-595-72
**Hypertension in the Inner City—**Finnerty FA Jr (District of Columbia General Hospital, Washington, D. C.)—*Amer Fam Phys* 5:80-81 (Mar) 1972

Thirty-five percent of inner city Negroes have hypertension in the District of Columbia. In the inner city of Washington, D.C., 71% of the population is Negro, and in 1965, 75% of the 645 deaths were attributed to hypertension. During a routine screen for hypertension taken in one of the local supermarkets in this community, 210 of 500 people examined were hypertensive. Several factors prevent people from adequately caring for their health in the inner city areas. A plan has been instituted to overcome some of these factors to hopefully achieve more adequate blood pressure control.

AB-596-72

The effects of Decadron in the acute stroke patient were evaluated in a double-blind study in 31 patients. There was a 12% improvement in the 17 patients in the steroid-treated group, while those treated with placebo deteriorated 12%. The 15 patients most severely affected by their stroke improved 23% while on steroids, while the placebo group deteriorated 14%. Steroids are beneficial in treating the acute stroke patient and it is suggested that the beneficial effects are due in part to a reduction in cerebral edema secondary to the infarction.

AB-597-72
**Localization of Ferritin-Conjugated Anti-Fibrin/Fibrinogen in Platelet Aggregates Produced In Vitro**—Shirasawa K, Barton BP, Chandler AB (Department of Pathology, Medical College of Georgia, Eugene Talmadge Memorial Hospital, Augusta, Georgia 30902)—*Amer J Path* 66:379-406 (Mar) 1972

An antifibrin/fibrinogen antibody was localized microscopically in artificial in vitro thrombi formed in the presence of the labeled antibody and in preformed ADP-induced platelet aggregates. The ferritin antibody was distributed throughout the central and peripheral regions of the platelet aggregates. The even distribution of the antibody indicated a specific reaction that had occurred before or during thrombus formation unrelated to infiltration of plasma. In the thrombi the antibody was localized on the surface layer of...
ABSTRACTS

the platelets and on the bridging structures between cohesive platelets. A release reaction occurs at the time of aggregation; the material released was tagged by the antibody, which suggests that fibrinogen released from within the platelet contributed to the structural bond and strengthened it. Fibrin is thought to be derived from within the platelet as well as from infiltrated plasma. Platelet fibrinogen appeared to take part in the cohesion of aggregated platelets and in the stabilization of the aggregates formed.

AB-598-72
Arteriosclerosis Induced by Radiation—Hayward RH (Department of Cardiovascular Surgery, Scott and White Clinic, Temple, Texas)—Surg Clin N Amer 52:359-366 (Apr) 1972

A case is reported of a patient treated with external irradiation (total dose = 2,000 roentgens) for toxic goiter which had previously been treated by subtotal thyroidectomy at age 28. Twenty-five years later the patient began witnessing transient attacks of dizziness and weakness of his right hand. Bruit could be heard over the manubrium and bases of the carotids. Angiography confirmed stenosis of the right common carotid. Review of the literature reveals animal studies in which vascular changes in the intima and media have been induced by irradiation.

AB-599-72
Physiologic Stasis of Roentgenographic Contrast Material at the Carotid Artery Bifurcation: Possible Relation to Atheroma Localization—Lagayowker MS, Stauffer HM, Safer JN (Department of Radiology, Temple University Health Sciences Center, Philadelphia, Pennsylvania)—Amer J Roentgen 114:803-809 (Apr) 1972

In 71 of 100 carotid artery bifurcations observed in 80 patients undergoing right retrograde brachial arteriography, a disturbance of blood flow could be identified along the posterior wall of the internal carotid artery. This disturbance could be seen in any age greater than 14 years old. This finding may represent the physiological zone of stasis which has been postulated to occur on the external wall ("Y" surface) of a branching vessel. Stasis in this area may predispose to atheroma formation.

AB-600-72

Pyridinolcarbamate was studied in rabbits to determine its ability to prevent atheroma. Hyperlipemia was not an action of the drug, but aortic atheromas in treated rabbits were much less pronounced than those of the controls. Electron microscopic study revealed the new drug reduces endothelial lipid penetration and it modifies the metabolism of the vessel wall so that there is lipid removal.

AB-601-72
The Heterogeneity of the Anticoagulant Response to Heparin—Estes JW (Departments of Pharmacology and Medicine, Boston University School of Medicine, Boston, Massachusetts)—J Clin Path 25:45-48 (Jan) 1972

The rate of disappearance of the effect of heparin on the whole body partial thromboplastin time was compared to the bioassayed plasma heparin concentration of heparin in 19 healthy medical students. The wide range of clinically observed responses to this drug may be attributed to marked individual variation. This is reflected in the variability of the slope of the anticoagulant's dose-effect curve with each subject's baseline coagulation status. The rate of disappearance of bioassayed heparin was less than the mean rate of disappearance of the drug's effect on clotting time. This discrepancy may be accounted for by the extensive binding of heparin to plasma proteins.

AB-602-72
The Significance of Variations in Immunoreactive and Clottable Fibrinogen in Health and Following Thrombosis—Wolf P, Farrell GW, Walton KW (Department of Experimental Pathology, University of Birmingham)—J Clin Path 25:36-44 (Jan) 1972

During a steady state of fibrinogen metabolism, immunoreactive and clottable fibrinogen estimates of plasma fibrinogen show close agreement. Discrepancies between these two factors may be of diagnostic significance. For example, values for immunoreactive fibrinogen are lower than for clottable fibrinogen during extensive thrombosis. This may be explained by formation of fibrin intermediates (cryoprophibrin) which fail to give immunodiffusion reactions. During intravascular catabolism due to plasmin activity, immunoreactive values exceed those for clottable fibrinogen. This discrepancy may be indicative of thrombolyis. Each discrepancy may be encountered during the alternating predominance of thrombosis or thrombolysis. An example may be seen physiologically in association with the menstrual cycle and pathologically following surgical operations or extensive intravascular thrombosis.
ABSTRACTS

AB-602-72

Thirty minutes of cerebral ischemia was produced in normothermic cats; recovery of neuronal activity was ascertained by recording EEG and the pyramidal response to electrical stimulation of the sensorimotor cortex. Following recovery from ischemia the incorporation of [14C]-labeled amino acids into brain tissue reached control values within four hours. The radioactivity of total amino acids in the free pool of the brain was increased. During the postischemic recovery phase there was a marked disaggregation of polysomes. During ischemia polysomes and monosomes were distributed similar to those in the control animals.

AB-604-72
Electrocardiographic Changes in Intracranial Lesions—Umali F, Gould L, Gomprecht RF (Department of Medicine, Misericordia-Fordham Affiliation, Fordham Hospital, Bronx, New York 10458)—Angiology 22:616-621 (Dec) 1971

Electrocardiograms were reviewed in 37 patients with CNS disorders. In 11 patients with subarachnoid hemorrhage, six (55%) had abnormal tracings characterized by nonspecific ST-T wave changes, a finding noted earlier by other authors. ECG abnormalities of a similar nature were seen in 17 (77%) of 22 patients with CNS disorders. In 11 patients with brain tumor, ST depression was seen in one and T wave abnormalities in the other three cases. Various mechanisms for such changes were discussed. It is likely an altered autonomic tone (particularly within the adrenergic system) as well as anatomic cardiac lesions play a role in the ECG changes observed.

AB-605-72
Remarks on the Reconstruction of Obliterating Atherosclerosis of the Internal Carotid Artery—Firt P (Research Centre of Cardiovascular Diseases, Institute of Clinical and Experimental Medicine, Prague, Czechoslovakia), Hejhal L, Weiss K—J Cardiovasc Surg 12:447-455 (Nov-Dec) 1971

The results of surgery in 454 patients operated upon for internal carotid artery stenotic lesions are reported. In patients with transient cerebral ischemic attacks and hemodynamically significant stenotic lesions (i.e., presence of a pressure gradient), 86% were relieved of their symptoms after surgery; in those without a pressure gradient, 92% were asymptomatic postoperatively. In 26 patients with asymptomatic stenoses, seven suffered an episode of brain ischemia within three years; the authors feel asymptomatic stenosis is an equally important indication for surgery. Patients with occlusions of the carotid artery of greater than one week's duration should not be corrected surgically. However, those with acute occlusions were surgically corrected, the most favorable results occurring in those of less than six hours' duration without evidence of massive focal damage. Long-term results (three to eight years) indicated 80% were without complaints. Surgery resulted in complete relief in 82% overall with a 1% mortality.

AB-606-72
Effect of Dipyridamole and Aspirin in Thrombotic Microangiopathy—Giromini M, Bouvier CA, Dami R, Denizot M, Jeannet M (Department of Medicine, Hôpital Cantonal, Geneva, Switzerland)—Brit Med J 1:545-546 (Feb 26) 1972

A new treatment regimen in a patient with thrombotic microangiopathy is described. Since the main problems in this condition include hemolysis and thrombopenia secondary to platelet consumption in fibrin thrombi, a reasonable approach seemed to be inhibition of platelet adhesiveness. Dipyridamole plus aspirin have been found to be effective in this endeavor in those patients receiving prosthetic heart valves. In the patient described in this paper, thrombopenia improved rapidly; within three days the platelet count was normal. A rapid fall in platelet count followed a decrease in the dose of dipyridamole but responded favorably when the original dose was resumed. The authors emphasize the need for more experience with these drugs since the risk to the patient is much less than with heparin and steroids, the accepted method of treatment at present.

AB-607-72

Platelet aggregation induced by adenosine diphosphate, collagen, and thrombin in platelet-rich human plasma can be inhibited by 30 to 300 μg/ml of AN 162. In an oral dose (30 to 100 mg/kg) given to guinea pigs, platelet aggregation was inhibited in vivo. At higher doses than those required for inhibition of platelet aggregation, AN 162 activated platelet factor 3. Although there was no effect on plasma clotting factors at doses at or below 300 μg/ml, a slight prolongation of whole blood clotting time was found in the rat and monkey.
ABSTRACTS

AB-608-72
Cerebral Blood Flow Before and After Carotid Endarterectomy—Engell HC, Boysen G, Ladegaard-Pedersen HJ, Henriksen H (Surgical Laboratory of Circulatory Research, Departments D and Anesthesiology, Rigshospitalet, Copenhagen, Denmark)—Vasc Surg 6:14-19 (Jan-Feb) 1972

Sixty-nine patients were operated upon for stenotic lesions of the internal carotid artery. Cerebral blood flow (CBF) was determined using the 133Xenon intracarotid injection method. In ten patients without measurable flow through the internal carotid artery prior to surgery, regional CBF increased significantly following endarterectomy (30.9 to 45.3 ml/100 gm/min). Restoration of internal carotid artery (ICA) flow was successful in all cases. In the remaining 59 endarterectomies ICA flows increased after surgery in 47 patients, decreased in 11, and were unmeasurable in one patient. In 40 patients, responsiveness of regional CBF was determined postoperatively. Both normocapnic and hypercapnic groups had an increase in regional CBF, while in the hypocapnic group there was no change. This indicated that autoregulation was still effective at low Paco2 (30 mm Hg) even when ICA flow was increased.

AB-609-72

Modification of dietary fats and cholesterol in a group of adolescent males at a boarding school was successful in lowering blood cholesterol. During the first three months of dietary regulation, those boys with the highest serum cholesterol levels (230 mg/100 ml or higher) had the greatest decrease in serum levels (15.6%), while those with the lower initial levels (199 mg/100 ml or lower) had a mean decrease of 8.3%. In the third month period the reductions were 13.3 and 5.1%, respectively. The authors re-emphasize the adolescent period as a most fruitful time to develop practices aimed at preventing athero-sclerotic vascular disease in later life.

AB-610-72
Diets of Different Fatty Acid Composition Producing Identical Serum Cholesterol Levels in Man—Grande F, Anderson JT, Keys A (Department of Physiological Hygiene, University of Minnesota, Minneapolis, Minnesota 55455)—Amer J Clin Nutr 25:53-60 (Jan) 1972

Four test diets containing various amounts of saturated and polyunsaturated fatty acids and carbohydrates were fed to subjects for four weeks. Final serum cholesterol and phospholipid concentrations were similar for all the diets. The test fats may be isocalorically exchanged for each other, for monoene fatty acid glycerides, and for dietary carbohydrates (mainly sucrose) without producing a significant change of serum cholesterol or phospholipid concentration. A butter diet produced higher levels of cholesterol and phospholipids than any of the test diets. The carbohydrate substitution diet produced a marked increase in the serum triglyceride as did the butter fat substitution diet. The authors conclude that saturated fatty acids with fewer than 12 carbon atoms do not affect serum cholesterol but elevate serum triglyceride, while those saturated fatty acids with 12 to 16 carbon atoms elevate serum cholesterol but have little effect on serum triglycerides.

AB-611-72
A Screening Procedure for Stroke—Shekelle RB (Department of Preventive Medicine, University of Illinois Medical Center, Chicago, Illinois 60680), Klawans HL, Ostfeld AM, Tufo HM, Kimble SW, Waxman J, MacLean JM, Erlich MA—Amer J Public Health 62:177-180 (Feb) 1972

A screening procedure composed of a set of questions and abbreviated neurological examination is described. The screen can be administered by nonmedical personnel. In an elderly population 45% of subjects with a positive screen were diagnosed by neurologists as having had a stroke and 8% of a sample with a negative screen were also diagnosed as having had a stroke. It is concluded that this screening procedure may successfully categorize subjects into a small group in which the probability of stroke is high and a large group in which the probability of stroke is low.

AB-612-72
Carotid Artery Injuries. Follow-Up of Fifteen Patients Treated in Viet Nam—Buchman RJ, Thomas PA Jr, Park B (Department of Surgery, Thoracic Surgery Service, Valley Forge General Hospital, Phoenixville, Pennsylvania 19460)—Angiology 23:97-102 (Feb) 1972

Fifteen patients were followed after receiving carotid artery wounds in Viet Nam, an injury comprising 5% of vascular war wounds. Two patients were hemiparetic following injury and failed to improve with carotid repair. Twelve of the remaining 13 patients had a favorable outcome following surgery, although a second surgical procedure was necessary in five patients. Those patients without a neurological deficit immediately following injury had favorable courses with the exception of one patient who developed a false aneurysm necessitating ligation of the internal carotid artery and subsequent...
hemiplegia. The authors conclude that penetrating neck wounds should be explored and those without neurological deficit can be repaired with favorable results. In one-third of cases reoperation is required.

AB-613-72
Blindness of an Adult Caused by Oxygen—Kobayashi T (Department of Anesthesiology, Kanazawa University Hospital, Kanazawa City, Japan 920), Murakami S—JAMA 219:741-742 (Feb 7) 1972

Artificial ventilation for 150 days with 80% oxygen in a 32-year-old man with myasthenia gravis resulted in optic atrophy. PaO₂ was maintained at 250 to 300 mm Hg and PaCO₂ was 30 to 40 mm Hg. The patient had gradual onset of darkness of vision of the left eye with the same symptom developing in the right eye four hours later. The patient had only light perception within 48 hours of the onset of symptoms. The oxygen was decreased to 60% and a PaO₂ of 120 to 160 mm Hg. There was only partial return of vision to the left eye, the right eye remaining blind. The authors warn of permanent visual damage which may occur in patients on prolonged respirator-supported ventilation.

AB-614-72
The Cerebrogram and the Spinal Cordogram—Harwood-Nash DC (Department of Radiology, The Hospital for Sick Children, Toronto, Ontario, Canada)—Amer J Roentgen 114:773-780 (Apr) 1972

During cerebral angiography, the capillary phase (the cerebrogram) is a useful diagnostic aid in children. Using the subtraction technique the gross ventricular size and normal vasculature can be easily demonstrated. The cerebrogram is most useful in the diagnosis of a mass lesion which may occur with displacement secondary to a tumor. A similar phenomenon is present infrequently in the cervical cord and medulla (spinal cordogram).

AB-615-72

Elastic modulus E' and loss modulus E'' of clotting blood and fibrinogen solutions were measured. The saturated value of E' is smaller and that of E'' is larger when blood is collected into a siliconized polyethylene test tube; the siliconized tube also induces a longer clotting time compared to blood collected in a nonsiliconized glass tube. The siliconization of the surface of the tube may influence the rate of production of thrombin in the blood.

AB-616-72

Platelets are important in initiation of intrinsic coagulation. Contact activation product is formed by platelet reaction with factors XII and XI. Contact product forming activity (CPFA) is specifically and rapidly stimulated by physiological concentrations of ADP in platelet suspensions not undergoing platelet aggregation; this is a reversible reaction. A phospholipid mixture with platelet factor 3 activity was inactive in all test systems for CPFA. The stimulation of CPFA by ADP was accompanied by a reversible change in platelet shape characteristic of the change in platelets in response to ADP.

AB-617-72
The Clotting of Blood and Fibrinogen-Thrombin Systems as Studied by Two Dynamic Instruments With Large and Small Amplitudes—Fukada E, Dintenfass L (Haemorheology Unit, Kanematsu Institute, Sydney Hospital, Sydney, N.S.W., Australia)—Biorheology 8:149-153 (Dec) 1971

Using the variable-frequency-thromboviscometer (VFTV) and the viscoelastorecorder (VER) clotting curves for human blood, plasma and fibrinogen solutions were determined. A maximum stress was not observed using the VER but was seen when curves were obtained with the VFTV. The mean shear strain is 40 times greater in the VFTV than in the VER and may explain the above observations. Only thrombin concentration is capable of affecting clotting times of fibrinogen-thrombin systems in VFTV; the clotting times are not affected by shear rate or shear strain. Shear rate greatly affects the viscosity of these systems. With increasing VFTV frequency of oscillation the viscosity decreases rapidly.

AB-618-72
Scanning Electron Microscopy of Thrombogenesis on Vascular Catheter Surfaces—Nachmani GH, Lessin LS, Motomiya T, Jensen WN (Department of Medicine, George Washington University Medical Center, Washington, D. C., 20037)—New Eng J Med 286:139-140 (Jan 20) 1972

Polyethylene catheters magnified 10,000 times displayed a variety of defects within the surface. Intra-catheters manifested thrombogenesis on both internal and external catheter surfaces. Three phases of thrombogenesis were noted: fibrin deposition, platelet aggregation, and red thrombus deposition.
ABSTRACTS

formation. The hazard of embolization of thrombus fragments from the lumen after injection through the catheter is emphasized.

ITEMS OF INTEREST


Antiplatelet Aggregant Agents and Thrombolytic Compounds in Myocardial Infarction: Current Status—Wessler S, Sherman LA (Departments of Medicine and Pathology, Washington University School of Medicine and the Jewish Hospital of St. Louis, St. Louis, Missouri)—Circulation 40:911-918 (Apr) 1972

These two articles, although about cardiac disease, contain comments on the methodology of clinical studies which is pertinent to studies on the treatment of cerebrovascular disease.

Treatment of Cerebrovascular Disorders—Klassen AC (Department of Neurology, University of Minnesota Medical School, Minneapolis, Minnesota 55455)—Int J Neurol 9:33-42, 1972

This is a review article on therapy.


A symposium on the brain death including observations from arteriography, echoencephalography, rheoencephalopathy, Xenon-clearance curves, and A-V O₂ differences, but excluding electroencephalopathy and clinical observations. (In French)

Cerebral Blood Flow and Metabolism: Effects of Anesthetic Drugs and Techniques—Smith AL (Department of Anesthesia, University of California, San Francisco, California 94122), Wollman H—Anesthesiology 36:378-400 (Apr) 1972


Disseminated Intravascular Coagulation (DIC): An Approach—Colman RW (Hematology Research Unit, Massachusetts General Hospital, Boston, Massachusetts 02114), Robboy SJ, Minna JD—Amer J Med 52:679-689 (May) 1972
Abstracts

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