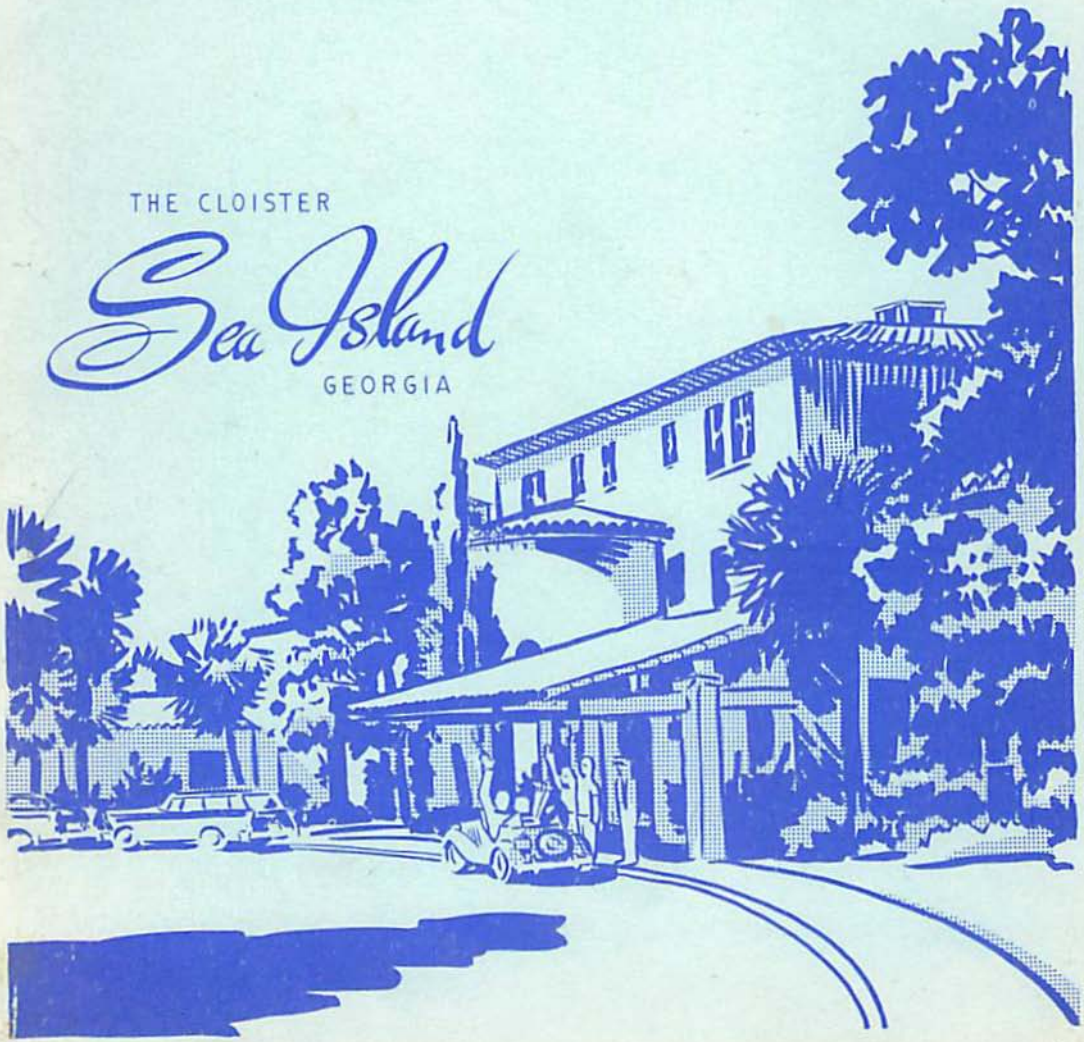
THE AMERICAN ACADEMY OF NEUROLOGICAL SURGERY

Nineteenth Annual Meeting
November 11, 12, 13, 1957



THE AMERICAN ACADEMY OF NEUROLOGICAL SURGERY

Nineteenth Annual Meeting

THE CLOISTER

SEA ISLAND, GEORGIA

November 11th, 12th and 13th, 1957

The American Academy Of Neurological Surgery

OFFICERS 1957

President ..... Arthur R. Elvidge
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— NOTES —

Monday, November 11, 1957

9:00 A. M. — REGISTRATION

Scientific Program

Arthur Elvidge, M.D., President, Presiding

Morning Session — 9:15 A. M.

1. PHYSIOLOGY OF THE HYPOTHERMIC STATE

W. H. Sweet, M.D., Boston, Massachusetts, W. B. Brewer, M.D., (by invitation) P. Osgood, M.D. (by invitation) and J. C. White, M. D. (by invitation)

1. Cooling of a dog by an extracorporeal shunt produces lower temperatures of the right ventricle than of the left if the heart is cooled at rates of 1° C. every 5 minutes or faster.

2. Such rates of cooling produce characteristic EKG changes, and eventually ventricular extrasystoles or ventricular fibrillation; similar changes, opposite in polarity, occur during rapid rewarming.

3. When the ventricular temperature inequalities are eliminated, the EKG returns well toward normal even at cardiac temperatures of 25° C.

4. In two of our patients cooled rapidly, EKG chages developed similar to those in the dogs, whereas in 14 other patients cooled and rewarmed slowly, any changes were minimal and perhaps related to abrupt delivery of cold blood to the right heart as, e.g., from a large dose of the ganglioplegic, Arfonad, or from elevation of the ice-encased legs.

5. The EKG changes seen in our dogs and patients with rapid cooling of the arterial blood or surface of the body, respectively, are similar to those seen by Hoff and Geddes upon rapid cooling of a small area of the dog's heart.

6. The contractile force of the dog's heart remains constant at ambient heart rates between 25° and 42° C.

7. In the dog, a high p CO2 depresses cardiac contractility, an effect increased at low temperatures.

8. In dog and man the slow intravenous administration of Arfonad is a safe means of combatting the arterial hypertension which may result during slow cooling.

9. In man, hypothermia below 30° plus hyperventilation to an alkalosis of pH 7.6 provoke, over a few hours, no more metabolic disturbances than those seen with such alkalosis in normothermic man.

10. Depression of the rates of the various mechanisms concerned with blood clotting is no greater in blood from a hypothermic patient than in blood from a normothermic patient when the samples are incubated at the temperature of the former; i.e. no special additional depression occurs within the cooled patient's body.

— NOTES —

2. PROBLEMS OF HYPOTHERMIC ANESTHESIA

S. L. Vandewater, M.D., W. M. Lougheed, M.D. and J. W. Scott, M.D., Toronto, Canada (by invitation)

A series of 128 neurosurgical cases operated upon under induced hypothermia are reviewed. The anesthetic agents used were Thiopentone, Nitrous Oxide, and Trichlorethylene, the Phenothiazine derivatives and Demerol (R), and finally Nitrous Oxide and Fluothane (R). The patients were allowed to respire spontaneously. The blood pH remained within normal range, in the absence of shivering and depressed respirations. Cardiac arrhythmias have occurred, all transient, except for two cases of ventricular fibrillation. The E.E.G. has revealed no evidence of cerebral damage from occlusion of the circulation, in the cases studied. No peripheral neuropathies from cold have occurred, but there has been one skin burn from hot water used in rewarming.

3. LOCALIZED CEREBRAL HYPOTHERMIA

Barnes Woodhall, M.D., Durham, North Carolina

This paper has to do with the development of an experimental design which includes an intact peripheral or systemic circulation and a localized extra-corporeal cerebral circulation. The main components of the cerebral circulation are a dual channel Sigma-motor pump, oxygenation chamber, heat exchanger and various devices for recording A-V oxygen differences, body and brain temperatures, the E.E.G. and E.K.G. and perfusion blood flow and perfusion pressure. Dogs were used as experimental animals and 16 survivors have been studied by standard neuropathological staining methods.

Under conditions of the coolant used at present, ice and water, and varying perfusion rates, localized brain cooling has been obtained to a level of 10° C. with minor reduction in body temperatures averaging 2° to 4° C. The usual experiment is carried out to a level of 20° brain temperature. At this point, the A-V oxygen differences are virtually nil, there is a flat E.E.G. record and only some bradycardia and lengthening of the PR and QT intervals are noted in the E.K.G.

Applications of this basic design will be discussed.

DISCUSSION TO BE OPENED BY:

J. Lawrence Pool, M.D., and Everett Grantham, M.D.

COFFEE BREAK

4. INTRACRANIAL ANEURYSMS AND HYPOTHERMIA

Eben Alexander, Jr., M.D., Courtland H. Davis, Jr., M.D. (by invitation) and Nancy Kester, M.D. (by invitation) Winston-Salem, North Carolina.

Prior to 1955 the approach to intracranial aneurysms was that of handling a pressing clinical problem with an inevitably high mortality. Since the introduction of hypothermia, the experience with intracranial aneurysms, including

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those of the anterior communicating artery, has been much more satisfactory. All single intracranial aneurysms demonstrated by angiography and not moribund have been treated by intracranial ligation during the past eighteen months. At least two individuals over sixty-five have been so treated successfully. There have been no cardiac complications. The details of the method, including exposure of the vertebral and carotid arteries prior to the intracranial procedure, are considered of great importance. The Mayfield Clip has been valuable in certain cases.

5. HYPOTHERMIA IN THE SURGICAL TREATMENT OF RUPTURED BERRY ANEURYSMS

E. Harry Botterell, M.D., W. H. Lougheed, M.D. (by invitation), Toronto, Canada

The problems in the surgical treatment of ruptured berry aneurysms are encountered in the first week after rupture. Between May 1954, and January, 1957, 73 cases were operated upon with 17 deaths. Of these 17, 16 occurred in the first week in 44 patients; only 1 death occurred after this period in 29 patients. Since January, 1957, 24 further patients have been operated upon, 17 of these being operated on in the first week with 3 deaths and 7 after this time without mortality. Therefore, a total of 61 aneurysms have been operated upon in the first week with 19 deaths compared with 36 operated upon after this time with 1 death.

If one further breaks down the mortality in the first week, it can be seen that in the first group of 44 patients operated upon in the first week, 12 of the 16 deaths occurred in Gr. 3 to 5 aneurysms, whereas there were only 4 deaths in 21 patients in Gr. 1 and 2. It, therefore, seems clear to us that anterior cerebral aneurysms especially and also internal carotid aneurysms, Gr. 3 to 5, remain the group which have a high mortality rate and necessitate further technical advances. It is our impression that the mortality in this group, if treated conservatively, would also be extremely high.

The site of the aneurysm is important, for the middle cerebral cases present with large intracerebral clot and rapid deterioration and, in spite of their grading, do well unless they are Gr. 5. The anterior cerebral aneurysms are more prone to ischemic softening and their proximity to the septal area and the increased tendency to postoperative thrombosis makes them a difficult group to handle. The internal carotid aneurysms are easily exposed and although the Gr. 3 to 5 aneurysms presented here do not bear out our impressions, we feel that the bad results in these groups in part are technical errors and can be overcome.

There are three factors which cause difficulty in handling aneurysms in the first week: (1) cerebral edema; (2) postoperative thrombosis; and (3) spasm.

Spasm when associated with trauma to the vessel wall, too close application of silver clip or atheromatous stenosis of the vessel enhance the possibility of thrombosis. The chance of thrombosis occurring is further increased by reduction in blood pressure due to hemorrhage or chemical agents, elevation of the head or perhaps occlusion of the cervical vessels in the face of a stenosis, atheromatous artery and spasm.

—NOTES —

6. ANEURYSMS OF THE ANTERIOR COMMUNICATING ARTERY

Curwood R. Hunter, M.D. (by invitation), Frank H. Mayfield, M.D.
Cincinnati, Ohio

The diagnostic and therapeutic problems of intracranial aneurysms differ remarkably in reference to the location of the lesion. This is the first of a series of papers in which the authors propose to report their experiences with intracranial aneurysms depending upon their location. The material for this paper will embrace data derived from 20 cases which have been treated by direct intracranial approach.

7. LIGATION OF THE COMMON CAROTID ARTERY IN THE NECK FOR INTRACRANIAL ANEURYSM: RESULTS IN 50 CASES

Stuart N. Rowe, M.D., and J. S. Davis, M.D. (by invitation) Pittsburgh, Pennsylvania

The selection of cases, the technique, and the results in a series of approximately 50 cases are reviewed. The follow-ups are not as complete nor as long as we would wish, but at the present time our feeling is that this procedure is not a panacea for all intracranial aneurysms but should be reserved for the wide-necked lesions situated on the internal carotid artery.

LUNCH 12:30 P.M.

AFTERNOON SESSION 2:00 P.M.

8 On CERVIAL CORDOTOMY — A NEW TECHNIQUE

Carl Graf, M.D. (by invitation), Buffalo, New York

Factors accounting for the variable results obtained with spinothalamic cordotomy are discussed. We have devised a new technique employing a cutting instrument of new design. We have found the advantages of this technique are: 1) the ability to produce a more uniformly precise quadrant section; 2) the operating time is shortened; 3) the postoperative morbidity is reduced; 4) an adequate sensory loss can be obtained.

9. CEREBRAL SWELLING

Joseph P. Evans, M.D., Chicago, Illinois, S. Ishii, M.D. (by invitation), R. H. Haynes, M.D., (by invitation), W. A. Kelly, MD. (by invitation)

The causes of cerebral swelling are multiple, some benign in character and others malignant in their mode of action and end results. In this paper an effort is made to sort out some of the causes in the hope of contributing to needed clarification. Brief reference will be made to some experimental work we have done using radioactive DIF in animals subjected to "controlled" extradural space consuming lesions.

— NOTES —

10. THE PREVENTION OF EXPERIMENTAL CONTRAST MEDIUM INJURY TO THE NERVOUS SYSTEM

George T. Tindall, M.D., (by invitation) Durham, North Carolina, G. Margolis, M.D. (by invitation), P. D. Kenan, M.D. (by invitation)

A method of producing contrast medium injury to the central nervous system using the spinal cord of the dog as the test site has been developed in our laboratory. This injury is produced by the rapid injection of 70% Urokon into the abdominal aorta of adult dogs through a retrograde femoral catheter in a dosage of 1 cc. per kilogram body weight and is characterized by a severe tonic-clonic spinal convulsion, a paraplegia during the post-injection period and a massive necrosis of the lumbosacral cord.

A number of drugs in varying dosages and concentrations were used in an effort to modify this toxic reaction. These included procaine, glucose, heparin, varidase, sucrose, papaverine and arfonad. The effect of hypothermia (27-29°C.) was also evaluated. In these studies, all agents were administered through the aortic catheter at specific time intervals prior to the injection of Urokon. The volume and rate of injection were adjusted so that the primary circulation of these agents was through the vascular bed to be exposed later to Urokon. A total of 75 dogs was used in these studies.

Only with glucose, procaine, and hypothermia was a significant protective effect obtained. The prophylactic administraton of glucose, which protected almost all of the animals from severe injury, was clearly the superior of these three therapeutic approaches. This agent was equally effective in both 1 and 2 gm./kg. dosage schedules. Studies are currently in progress which are aimed toward establishment of optimal concentrations and dosages of both procaine and glucose.

The rationale behind the use of each agent tested and the possible mechanism of the protective effects of glucose and procaine will be discussed.

11. WATER AND ELECTROLYTE BALANCE STUDIES FOLLOWING INTRACRANIAL INJURY

Robert McLaurin, M.D., Cincinnati, Ohio

Eight patients have been carefully studied from the standpoint of electrolyte and water balance following intracranial injury. Three of these were the result of craniocerebral trauma, and 5 patients sustained the intracranial disturbance coincident with surgical craniotomy for a variety of causes. The studies indicate a mild retention of water and sodium, and minimal loss of potassium, changes which are qualitatively similar to, but of considerably less magnitude than, those seen after general surgical procedures. It is concluded that restriction of sodium and administration of additional potassium may not be necessary after cerebral trauma or surgery.

— NOTES —

12. CAUSALGIA OF THE HEAD AND NECK TREATED BY SYMPATHECTOMY

George S. Baker, M.D., Rochester, Minn.

13. THE USE OF A CAUDAL AIR BUBBLE IN THE CONTROL OF ALCOHOL INJECTION TO RELIEVE FLEXION REFLEXES

F. K. Bradford, M.D., Houston, Texas

By placing the patient with the caudal end of the thecal sac elevated and replacing spinal fluid with gas through a needle at the thoracolumbar junction, alcohol can be injected in a compact layer beneath the bubble to effect root destruction.

14. VENTRICULOGRAM USING NEEDLE PERFORATION OF THE SKULL

Stuart N. Rowe, M.D., Pittsburgh, Pennsylvania, and
Robert J. Brocker, M.D. (by invitation)

It has been found feasible in adults to make a hole in the region of the coronal suture on the right side, with a large spinal needle, and then insert a smaller spinal needle through it into the ventricle for a ventriculogram. Thus far, no clinical nor operative evidence of undue trauma or hemorrhage has been found after a fairly large series done during the past year.

15. TECHNICAL MODIFICATIONS IN TREATMENT FOR CRANIOSTENOSIS

William B. Scoville, M.D., Hartford, Connecticut

Two modifications of Matson's operation have been utilized with the intent of lessening epidural bleeding, which can become alarming and in the past has prevented the writer from completing single stage procedures in those cases having craniostenosis of all the sutures. (1 Position on the table for craniostenosis of sagittal suture: Side position with table at a forty-five degree angle. In those rare cases of stenosis of all sutures, a sitting position has been utilized. (2 Drill holes and lacing have been omitted for plastic repair of craniostenosis of sagittal suture. A narrow furrow is used on either side of the midline and plastic film wrapped completely around the central bridge, shortening the procedure, lessening the bleeding, and making the chance of bridging less likely.

16. CAROTID AMYTAL TEST FOR LATERALIZATION OF SPEECH DOMINANCE

Theodore Rasmussen, M.D., Montreal, Canada

The intracarotid injection of 200 mg. of sodium amytal produces transient hemiplegia and aphasia if the dominant hemisphere is being injected. This permits positive identification of lateralization of speech function in left-handed and ambidextrous patients. This test, first carried out by Wada and reported in 1949, has proven valuable and safe in our hands during the past two years.

4:00 P. M. EXECUTIVE SESSION

— NOTES —

Tuesday, November 12, 1957

Morning Session — 9:00 A.M.

17. THE PROBLEM OF LOW BACK PAIN

James Greenwood, Jr., M.D., Houston, Texas

A study of the causes of imperfect results in disc operations has shown that while a high percentage of results of surgery are excellent, the basic problem of low back pain and sciatica, particularly as related to cartilage changes, has not been solved. Observation over a period of twenty years has shown a significant (5%) recurrence of disc trouble. This may be at the site of previous operation or more often at a new level, indicating that the basic etiology of disc disease and disc herniation has not been disclosed. The role of trauma, except in a few isolated instances, is open to question, and the need for investigation of disc metabolism, endocrine factors, toxic causes, deficiency, and heredity is emphasized.

18. THE MECHANISM OF OBSCURE SCIATIC PAIN DUE TO PERINEURIAL SACRAL CYSTS

J. Lawrence Pool, M.D., New York, New York

The diagnosis of perineurial sacral cysts is often overlooked because of the rather vague nature of symptoms, the absence of overt signs, and occasionally an initially negative myelographic study. Strict attention to the history, the demonstration of tenderness to percussion over the sacrum, and initial or delayed myelographic evidence of an intra-sacral cyst can lead to an accurate diagnosis and thus save the patient months or even years of unnecessary suffering.

Two typical cases are reported with color photographs of each operation demonstrating persisting distention of the perineurial cysts despite decompression of the adjacent subarachnoid space by release of cerebrospinal fluid. It is therefore suggested that the mechanism of pain is due to progressive distention of these sacs by cerebrospinal fluid which becomes trapped within them when the patient is upright. Significant features of the history, neurological examination and technique of myelography are discussed that serve to call attention to these lesions.

19. INTERSPACE RECONSTRUCTION AND SPINE STABILIZATION WITH METHYL ACRYLIC AFTER DISC OPERATION

David Cleveland, M.D., Milwaukee, Wisconsin (by invitation)

Following the subtotal removal of herniated or ruptured intervertebral discs in nearly 200 patients, the interspace has been spread to its maximum extent and filled with freshly prepared acrylic. The acrylic hardens within fifteen minutes, leaving the adjoining vertebra firmly stabilized. In the author's hands, the postoperative results have been superior to the results obtained in a larger series of patients, in whom only the disc has been removed. Complications, which should be weighed very seriously in evaluating this procedure, have occurred as a result of faulty instillation in three patients.

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20. THE EFFECT OF LOCAL POLYMERIZATION OF MYETYL-METHACRYLATE IN BONES AND JOINTS, WITH REMARKS CONCERNING ITS USE IN INTERVERTEBRAL DISC CAVITIES

Wallace B. Hamby, M.D., Buffalo, New York, H. T. Glaser, M.D. (by invitation)

To determine the local effect of polymerization within a cavity simulating an intervertebral disc space, mixtures of the acrylic components were allowed to "cure" in knee joint spaces of dogs. Definite changes occurred, consisting of synovial arthritis with osteochondritis, focal osteomyelitic reaction with subchondral osteoclastic bone resorption and new bone formation. In this material, the changes reached their peak at about the fifth month and showed evidence of subsiding by the eighth month.

In fourteen patients, surgical intervertebral disc cavities were filled with acrylic allowed to polymerize in situ according to the method of Cleveland. These are compared with grossly comparable patients not so treated, during the same time period, terminated at least one year ago.

DISCUSSION TO BE OPENED BY:

F. Keith Bradford, M.D.

COFFEE BREAK

21. CERVICAL DISCS: A FINAL SUMMARY OF 378 CASES

William Scoville, M.D., Benjamin Whitcomb, M.D., Hartford, Conn.; Robert McLaurin, M.D., Cincinnati, Ohio

A summary has been made of results of surgery on patients with cervical ruptured discs. The majority were "soft" discs, evenly divided between acute unbearable pain and chronic nagging pain, manifested by neck, shoulder and radiating arm pain with distinct clinical signs and symptoms differentiating the various locations. Myelograms were done in practically all cases. Operative removal through the medial portion of the facet by use of a power drill in an upright position was carried out with special precautions against air embolism. The results are most favorable.

22. EXTRADURAL HEMATOMA OF THE SPINAL CANAL

W. C. Cotter, M.D., (by invitation), H. Thomas Ballantine, Jr., M.D., Boston, Massachuetts

Although the consequences of spinal cord or nerve root compression by extradural hematoma can be disastrous, the condition is rarely encountered except as a surgical complication. To the 23 previously reported cases of "spontaneous" extradural hematoma we are adding four others. A review of the salient features of the entire group warrants the following conclusions: 1) a history of trauma or "bleeding tendency" is not an essential diagnostic feature; 2) to obtain a satisfactory surgical end result, early operation is imperative; 3) it is important for this entity to be differentiated from such medical states as thrombosis of the anterior spinal artery.

—NOTES —

23. DISCUSSION OF NEUROLOGICAL TRAINING PROGRAMS

Edwin B. Boldrey, M.D., San Francisco, California

12:00 NOON EXECUTIVE SESSION

— NOTES —

Wednesday, November 13, 1957

Morning Session — 9:00 A.M.

24. STUDIES WITH PERIDURAL ANESTHESIA

Ernest W. Mack, M.D., Reno, Nevada

Studies were made of spinal fluid specimens obtained during spinal surgery in the cases which have received peridural anesthesia, attempting in this manner to determine, if possible, the site of action of the Xylocaine used. Preliminary surveys indicate that this method of anesthesia may well be a modified type of spinal anesthesia.

25. THE EFFECT OF GAMMA RADIATION ON MALIGNANT BRAIN TUMORS, USING A RADIOACTIVE ISOTOPE IN THE TUMOR BED

Charles Drake, M.D., London, Ontario, Canada (by invitation)

Over a three-year period six cases of malignant glioma have been subjected to intracavitary gamma radiation of the tumor bed using Iridium 192 in a special applicator. The dose has varied from 10,000 — 36,000 R at the surface to 2,000 — 7,200 R at a depth of 2½ cm. given over a period of 40 hours to 8 days. The results have been disappointing in that only 1 case has survived over two years. Careful histological studies of the brain were done.

26. AMERICAN ACADEMY OF NEUROLOGICAL SURGERY AWARD PAPER

OBSERVATIONS ON METHODS OF INDUCED HYPOTENSION AND HYPOTHERMIA IN THE RHESUS MONKEY

Byron C. Pevehouse, M.D., San Francisco, California

COFFEE BREAK

27. INTERNAL CAROTID ARTERY OCCLUSION

J. G. Galbraith, M.D., Birmingham, Alabama

The neurologic symptoms associated with occlusion of the internal carotid artery are well known. Recently the syndrome of partial carotid obstruction has been encountered and defined. Early arteriography allows visualization of the obstruction at a time when it is still segmental in character, thus permitting a by-pass procedure. The angiographic pattern of these lesions is presented. Factors which enter into selection of cases for surgical by-pass procedures are considered, along with results in surgically treated cases.

28. RECONSTRUCTION OF CERVICAL CAROTID ARTERY FOR OCCLUSIVE DISEASE

Hannibal Hamlin, M.D., Providence, Rhode Island, W. M. Lougheed, M.D. (by invitation), William H. Sweet, M.D.

Occlusive disease of the cervical carotid artery, because of its predominantly neurologic manifestations, is brought to the attention of the neuro-

—NOTES —

surgeon more often than to the vascular surgeon. Efforts to re-establish circulation through a compromised carotid system depend more upon knowledge of vascularity as a factor of brain function than upon experience with techniques of vascular surgery (which can readily be acquired). We discuss current methods of cervical carotid reconstruction derived from experiences with several cases of thrombosis or threatened thrombosis.

29. CAROTID ENDARTERECTOMY, INDICATIONS, TECHNIQUES, AND RESULTS

Francis Murphey, M.D., Memphis, Tennessee, J. Miller, M.D. (by invitation)

Experience with a large number of patients with either complete or partial stenosis of the internal carotid artery in the neck are given. A number of these have had endarterectomies, some with apparently good results.

DISCUSSION TO BE OPENED BY: R. C. L. Robertson, M.D.

12:00 NOON EXECUTIVE SESSION

Program of The Women's Auxiliary

of

THE AMERICAN ACADEMY OF NEUROLOGICAL SURGERY

President—Mrs. Frank H. Mayfield

MONDAY, NOVEMBER 11, 1957

11:00 A. M.—Registration

12:00 Noon—Sherry Party

12:30 P. M.—Luncheon

1:30 P. M.—Flower Demonstration

6:00 P. M.—Cocktail Time — Barbecue and Fish Fry

TUESDAY, NOVEMBER 12, 1957

10:00 A. M.—Shopping or Sight-Seeing Tours Can Be Arranged as Requested

1:00 P. M.—Lunch

7:00 P. M.—Cocktail Party

8:00 P. M.—Formal Banquet

Toastmaster—Guy L. Odom, M.D.

Speaker—Arthur R. Elvidge, M.D.
"Glimpses of Ancient Civilizations"

Dancing until 1:00 A. M.

WEDNESDAY, NOVEMBER 13, 1957

Morning and afternoon free

6:30 P. M.—Cocktail Time

7:30 P. M.—Dinner

Membership Roster

of

THE AMERICAN ACADEMY OF NEUROLOGICAL SURGERY

FOUNDED OCTOBER 28, 1938

HONORARY MEMBERS — 5

	ELECTED
Dr. Winchell McK. Craig Mayo Clinic, Rochester, Minnesota	1942
Sir Geoffrey Jefferson Department of Neurosurgery, The Royal Infirmary Manchester 13, England	1951
Dr. W. Jason Mixter Nobska West, Woods Hole, Massachusetts	1951
Dr. R. Eustace Semmes 899 Madison Ave., Memphis 3, Tennessee	1955
Dr. R. Glen Spurling 405 Heyburn Bldg., Louisville 2, Kentucky	1942

CORRESPONDING MEMBERS — 1

Dr. O. William Stewart (deceased)
Montreal, Quebec

SENIOR MEMBERS — 1

Dr. Olan R. Hyndman Veterans Administration Hospital Iowa City, Iowa	1941

ACTIVE MEMBERS — 63

Member's Name, Office Address	Wife's Name Home Address	Year Elected
Dr. Eben Alexander, Jr. Bowman Gray Sch. of Medicine Winston-Salem 7, No. Carolina	Betty 521 Westover Ave. Winston-Salem, No. Carolina	1950
Dr. George S. Baker Section on Neurological Surgery Mayo Clinic Rochester, Minnesota	Enid Salem Road, Route 1, Rochester, Minn.	1940
Dr. H. Thomas Ballantine, Jr. Massachusetts General Hospital Boston 14, Massachusetts	Elizabeth 15 Common Street Dedham, Massachusetts	1951
Dr. William F. Beswick 685 Delaware Avenue Buffalo 9, New York	Phyllis	1949

Member's Name, Office Address	Wife's Name Home Address	Year Elected
Dr. Edwin B. Boldrey Univ. of Calif. Medical School San Francisco 22, California	Helen 924 Hayne Road San Mateo, California	1941
Dr. E. Harry Botterell Medical Arts Building 280 Bloor Street, West Toronto 5, Ontario	Margaret 2 Meredith Crescent Toronto, Ontario, Canada	1938
Dr. Spencer Braden 1304 Hanna Building Cleveland 15, Ohio	Mary	Founder
Dr. F. Keith Bradford 410 Hermann Professional Bldg. 6410 Fannin Street Houston 25, Texas	Byra 3826 Linklea Drive Houston 25, Texas	1938
Dr. Howard A. Brown 384 Post Street San Francisco 8, California	Dorothy 127 San Pablo Avenue San Francisco, California	1939
Dr. Harvey Chenault 200 West Second Street Lexington 6, Kentucky	Margaret Alleghan, Nicholasville Road Lexington, Kentucky	1949
Dr. Donald F. Coburn 221 Plaza Time Building Country Club Plaza Kansas City 2, Missouri	Max	1938
Dr. Edward W. Davis 806 S. W. Broadway Portland 5, Oregon	Barbara 1714 N.W. 32nd Avenue Portland 10, Oregon	1949
Dr. Francis A. Echlin 164 East 74th St. New York 21, New York	Letitia	1944
Dr. Dean H. Echols 3503 Prytania Street New Orleans, Louisiana	Fran 1428 First Street New Orleans 13, Louisiana	Founder
Dr. Arthur R. Elvidge Montreal Neurological Institute 3801 University Street Montreal 2, Quebec		1939
Dr. Theodore C. Erickson 1300 University Avenue Madison 6, Wisconsin	Emily	1940
Dr. Joseph P. Evans University of Chicago Clinics Chicago 37, Illinois	Hermene 1234 East 56th Street Chicago, Illinois	Founder

Member's Name, Office Address	Wife's Name Home Address	Year Elected
Dr. John D. French Veterans Administration Hospital Long Beach 4, California	Dorothy 10772 Chalon Road Los Angeles 27, California	1951
Dr. Lyle A. French 2910 46th Avenue South Minneapolis 6, Minnesota	Gene 2868 West River Road Minneapolis 6, Minnesota	1954
Dr. James G. Galbraith 2020 15th Avenue South Birmingham, Alabama	Peggy 4227 Altamont Road Birmingham, Alabama	1947
Dr. Everett G. Grantham 405 Heyburn Building Louisville 2, Kentucky	Mary Carmel 410 Mockingbird Hill Road Louisville 7, Kentucky	1942
Dr. John R. Green 550 West Thomas Road Patio A, Suite 202 Phoenix, Arizona	Georgia 88 Country Club Drive Phoenix, Arizona	1953
Dr. James Greenwood, Jr. 1105 Hermann Prof. Bldg. 6410 Fannin Street Houston 25, Texas	Mary 3394 Chevy Chase Blvd. Houston 19, Texas	1952
Dr. Wesley A. Gustafson 700 North Michigan Avenue Chicago 11, Illinois	Jennie 2129 Central Park Evanston, Illinois	1942
Dr. Wallace B. Hamby 140 Linwood Avenue Buffalo 9, New York	Hellyn 19 Middlesex Road Buffalo 16, New York	1941
Dr. Hannibal Hamlin 270 Benefit Street Providence 3, Rhode Island	Margaret	1948
Dr. Jess D. Herrmann 525 Northwest Eleventh Street Oklahoma City 3, Oklahoma	Mary Jo 1519 Glenwood Oklahoma City, Oklahoma	1938
Dr. Henry L. Heyl Hitchcock Clinic Hanover, New Hampshire	Katharine Norwich, Vermont	1951
Dr. William S. Keith Toronto Western Hospital 399 Bathurst Street Toronto 2B, Ontario	Eleanor	Founder
Dr. Ernest W. Mack 505 Arlington Ave., Suite 212 Reno, Nevada	Roberta	1956

Member's Name, Office Address	Wife's Name Home Address	Year Elected
Dr. George L. Maltby 203 State Street Portland 3, Maine	Sim Falmouth, Foreside, Maine	1942
Dr. Donald D. Matson 300 Longwood Avenue Boston 15, Massachusetts	Dorothy 44 Circuit Road Chestnut Hill 67, Massachusetts	1950
Dr. Frank H. Mayfield 506 Oak Street Cincinnati 19, Ohio	Queenee 3519 Principio Ave. Cincinnati 26, Ohio	Founder
Dr. Augustus McCravey 540 McCallie Avenue Chattanooga 3, Tennessee	Helen 130 North Crest Road Chattanooga, Tennessee	1944
Dr. Robert L. McLaurin Cincinnati General Hospital Cincinnati, Ohio	Katherine 2470 Grandis Road Cincinnati 8, Ohio	1955
Dr. William F. Meacham 2122 West End Avenue Nashville 5, Tennessee	Alice 3513 Woodmont Blvd. Nashville 12, Tennessee	1952
Dr. John M. Meredith 1200 East Broad Street Richmond 19, Virginia	Etta 3 Greenway Lane Richmond, Virginia	1946
Dr. Edmund J. Morissey 450 Sutter Street, Suite 520 San Francisco 8, California	Kate 2700 Vallejo Street San Francisco, California	1941
Dr. Francis Murphey Suite 525, Physicians & Surgeons Building Memphis 3, Tennessee	Roder	Founder
Dr. Frank E. Nulsen Division of Neurosurgery University Hospitals Cleveland 6, Ohio	Ginny 2691 Landon Shaker Heights, Ohio	1956
Dr. Guy L. Odom Duke Univ. School of Medicine Durham, North Carolina	Suzanne 2812 Chelsea Circle Durham, North Carolina	1946
Dr. J. Lawrence Pool 710 West 168th Street New York 32, New York	Angeline	1940
Dr. Robert Pudenz 744 Fairmount Avenue Pasadena 1, California	Ruth 2036 San Pasqual Pasadena 10, California	1943

Member's Name, Office Address	Wife's Name Home Address	Year Elected
Dr. John Raaf 1010 Medical Dental Building Portland 5, Oregon	Lorene 390 S.W. Edgecliff Road Portland 1, Oregon	Founder
Dr. Aiden A. Raney 2010 Wilshire Blvd. Los Angeles 57, California	Mary	1946
Dr. Rupert B. Raney 2010 Wilshire Blvd. Los Angeles 57, California	Alta 435 S. Curson Ave. Los Angeles 36, California	1939
Dr. Theodore B. Rasmussen Montreal Neurological Institute 3801 University Street Montreal 2, Quebec, Canada	Catherine 29 Surrey Drive Montreal 16, Quebec, Canada	1947
Dr. David L. Reeves 316 West Junipero Street Santa Barbara, California	Marjorie 595 Picacho Lane, Montecito Santa Barbara, California	1939
Dr. R. C. L. Robertson 411 Hermann Professional Bldg. 6410 Fannin Street Houston 25, Texas	Marjorie	1946
Dr. Stuart N. Rowe 302 Iroquois Building 3600 Forbes Street Pittsburgh 13, Pennsylvania	Elva 6847 Reynolds St. Pittsburgh 8, Pennsylvania	1938
Dr. Henry G. Schwartz Department of Surgery Washington University Saint Louis 10, Missouri	Reedie 2 Briar Oak Saint Louis 24, Missouri	1942
Dr. William B. Scoville 85 Jefferson Street Hartford 14, Connecticut	Emily	1944
Dr. C. Hunter Shelden 744 Fairmount Avenue Pasadena 1, California	Betty 1345 Bedford Road San Marino, California	1941
Dr. Samuel R. Snodgrass Univ. of Texas Medical Branch Galveston, Texas	Margaret	1939
Dr. Homer S. Swanson 384 Peachtree Street, N. E. Atlanta 3, Georgia	La Myra 1951 Mt. Paran Road, West Atlanta, Georgia	1949
Dr. William H. Sweet Massachusetts General Hospital Boston 14, Massachusetts	Mary 35 Chestnut Place Brookline 46, Massachusetts	1950

Member's Name, Office Address	Wife's Name Home Address	Year Elected
Dr. Alfred Uihlein Section on Neurological Surgery Mayo Clinic Rochester, Minnesota	Ione Sunny Slopes, Route 1 Rochester, Minnesota	1950
Dr. A. Earl Walker Johns Hopkins Hospital Division of Neurological Surgery 601 N. Broadway Baltimore 5, Maryland	Terrye	1938
Dr. Exum Walker 133 Doctors Building Atlanta 3, Georgia	Frances 1819 Greystone Road, N.W. Atlanta, Georgia	1938
Dr. Arthur A. Ward, Jr. Univ. of Wash. Sch. of Medicine Division of Neurosurgery Seattle 5, Washington	Janet	1953
Dr. Thomas A. Weaver Suite 1005, Third National Bldg. Dayton 2, Ohio	Mary	1943
Dr. Benjamin B. Whitcomb 85 Jefferson Street Hartford 14, Connecticut	Margaret 38 High Farms Road West Hartford, Connecticut	1947
Dr. Barnes Woodhall Duke Univ. School of Medicine Durham, North Carolina	Frances 4006 Dover Road, Hope Valley Durham, North Carolina	1941

Guests of The Academy

1957

Dr. Maitland Baldwin ..... Bethesda, Maryland
Dr. Harold F. Buchstein ..... Minneapolis, Minnesota
Dr. Charles A. Carton ..... New York, New York
Dr. David Cleveland ..... Milwaukee, Wisconsin
Dr. Courtland H. Davis, Jr. ..... Winston-Salem, North Carolina
Dr. Charlie Drake ..... London, Ontario, Canada
Dr. Daniel Earley ..... Cincinnati, Ohio
Dr. Harry T. Glaser ..... Kenmore, New York
Dr. Carl J. Graf ..... Buffalo, New York
Dr. Griff Harsh, III ..... Birmingham, Alabama
Dr. Nancy Kester ..... Winston-Salem, North Carolina
Dr. William Lougheed ..... Toronto, Canada
Dr. Bert H. McBride ..... Cincinnati, Ohio
Dr. Luther Martin ..... Charleston, South Carolina
Dr. Joe H. Miller ..... Memphis, Tennessee
Dr. Byron C. Pevehouse ..... San Francisco, California
Dr. James T. Shelden ..... Lakeland, Florida
Dr. George T. Tindall ..... Durham, North Carolina
Dr. Charles E. Troland ..... Richmond, Virginia
Dr. Stuart Vandewater ..... Toronto, Canada
Dr. Alice McNeal ..... Birmingham, Ala.

Past Meetings of The Academy

Hotel Netherland Plaza, Cincinnati, Ohio ..... October 28-29, 1938
Roosevelt Hotel, New Orleans, Louisiana ..... October 27-29, 1939
Tudor Arms Hotel, Cleveland, Ohio ..... October 21-22, 1940
Ambassador Hotel, Los Angeles, California ..... November 11-15, 1941
The Palmer House, Chicago, Illinois ..... October 16-17, 1942
Hart Hotel, Battle Creek, Michigan ..... September 17-18, 1943
Ashford General Hospital
White Sulphur Springs, West Virginia ..... September 7-9, 1944
The Homestead, Hot Springs, Virginia ..... September 9-11, 1946
Broadmoor Hotel, Colorado Springs, Colorado ..... October 9-11, 1947
Windsor Hotel, Montreal, Canada ..... September 20-28, 1948
Benson Hotel, Portland, Oregon ..... October 25-27, 1949
Mayo Clinic, Rochester, Minnesota ..... September 28-30, 1950
Shamrock Hotel, Houston, Texas ..... October 4-6, 1951
Waldorf Astoria Hotel, New York City ..... September 29-October 1, 1952
Biltmore Hotel, Santa Barbara, California ..... October 12-14, 1953
Broadmoor Hotel, Colorado Springs, Colorado ..... October 21-23, 1954
The Homestead, Hot Springs, Virginia ..... October 27-29, 1955
Camelback Inn, Phoenix, Arizona ..... November 8-10, 1956

PAST PRESIDENTS

Dean Echols 1938-39
Spencer Braden 1940
Joseph P. Evans 1941
Francis Murphey 1942
Frank H. Mayfield 1943
A. Earl Walker 1944
Barnes Woodhall 1946
William S. Keith 1947
Howard Brown 1948
John Raaf 1949
E. Harry Botterell 1950
Wallace B. Hamby 1951
Henry Schwartz 1952
J. Lawrence Pool 1953
Rupert Raney 1954
David L. Reeves 1955
Stuart N. Rowe 1956

PAST VICE-PRESIDENTS

Francis Murphey 1941
William S. Keith 1942
John Raaf 1943
Rupert B. Raney 1944
Arthur Elvidge 1946
John Raaf 1947
Arthur Elvidge 1948
F. Keith Bradford 1949
David L. Reeves 1950
Henry Schwartz 1951
J. Lawrence Pool 1952
Rupert B. Raney 1953
David L. Reeves 1954
Stuart N. Rowe 1955
Jess D. Herrmann 1956

PAST SECRETARY-TREASURERS

Francis Murphey 1938-39-40
A. Earl Walker 1941-42-43
Theodore C. Erickson 1944-46-47
Wallace B. Hamby 1948-49-50
Theodore Rasmussen 1951-52-53
Eben Alexander, Jr. 1954-55-56-57

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