

Theodore Ramsey

Program
of the
Eleventh Annual Meeting
of
THE AMERICAN ACADEMY
OF
NEUROLOGICAL SURGERY



OCTOBER 24 - 25 - 26 - 27, 1949



PORTLAND, OREGON *and* TIMBERLINE, OREGON

THE AMERICAN ACADEMY OF NEUROLOGICAL
SURGERY

WOMEN'S AUXILIARY

Eleventh Annual Meeting,
Portland and Timberline, Oregon

October 24, 25, 26, 27, 1949

MONDAY, October 24, 1949

- 10:00 a. m.—REGISTRATION AND MEETING AT BENSON
HOTEL.
- 12:30 p. m.—LUNCHEON, UNIVERSITY CLUB.
- 2:30 p. m.—SIGHTSEEING BY BUS.
- 3:30 p. m.—OASIS AT THE HOME OF DOCTOR AND MRS.
JOHN RAAF.
- 7:00 p. m.—FORMAL DINNER FOR MEMBERS AND
GUESTS AT THE TOWN CLUB.

TUESDAY, October 25, 1949

- 8:00 a. m.—BUSES LEAVE BENSON HOTEL FOR TRIP UP
COLUMBIA RIVER AND THENCE TO TIM-
BERLINE.
- 12:30 p. m.—LUNCHEON AT COLUMBIA GORGE HOTEL.
- 2:30 p. m.—CONTINUE TRIP TO TIMBERLINE LODGE.

WEDNESDAY, October 26, 1949

- 10:00 a. m.—MEETING AT TIMBERLINE LODGE.
- 12:30 p. m.—LUNCHEON, TIMBERLINE LODGE.
- 2:30 p. m.—RECREATION.
- 7:00 p. m.—COCKTAILS.
- 8:00 p. m.—ANNUAL DINNER (formal).

THURSDAY, October 27, 1949

- 10:00 a. m.—MEETING AT TIMBERLINE LODGE.
- 12:30 p. m.—LUNCHEON.

Departure

OFFICERS

President

JOHN RAAF

Vice-President

KEITH BRADFORD

Secretary-Treasurer

WALLACE B. HAMBY

Executive Committee

GEORGE S. BAKER

KEITH BRADFORD

HOWARD BROWN

WALLACE B. HAMBY

JOHN RAAF

PROGRAM

MONDAY, October 24, 1949

8:30 a. m.

Buses leave Benson Hotel for University of Oregon Medical School.

9:00 a. m.

Registration of members and guests.

9:30 a.m.

Presentation of papers by members of staff of University of Oregon Medical School. (Meeting in Library Auditorium).

(1)

An analysis of Failures in Electroencephalographic Localization in Expanding Intracranial Lesions.

ROBERT S. DOW and RAY V. GREWE

Electroencephalographic studies on one hundred consecutive pathologically-proven expanding intracranial lesions show that the principal factor leading to failure in localization is the site of the pathology. This was the cause of failure in twenty patients in this series. Most of those patients had lesions below the tentorium or in the region of the third ventricle. Analysis in terms of the pathological process showed that the more rapidly progressive and destructive lesions are the most easily localized. Ninety per cent (90%) of abscesses and eighty per cent (80%) of glioblastoma multiforme were correctly localized. Of seventy-four intracerebral lesions, sixty (81.5%) were correctly localized. Seven (9.5%) showed diffuse abnormality. Four (5%) showed normal records, and three (4%) were localized to the wrong site. The principal cause of diffuse abnormality and incorrect localization was the presence of coma. A small but significant number of patients with expanding intracranial lesions showed normal electroencephalograms.

①

NOTES

Scalp to scalp leads - 40-45 min. recording -

3 channel Grass machine - 16 electrodes -

5% had normal records -

11% borderline records -

(2)

Experimental Hyperalgesia.

MARGARET A. KENNARD

Chronic hyperirritability of the sensory nervous system has been produced in cats by the application of alumina cream to the spinal cord. These animals slowly develop an enduring hyperirritability, such that the affected skin areas become responsive to light touch and pain stimuli. The behavior of the cats is such that these stimuli appear to produce pain. The location and spread of these signs and symptoms make the syndrome resemble that of causalgia in man.

(3)

The Nature of the Pressor Principle in Tumors of the Adrenal Medulla; Basis for Actions of Dibenamine.

W. B. YOUMANS

Patients with tumor of the adrenal medulla may have either paroxysmal or sustained hypertension. The hypertension is produced by liberation of sympathomimetic substances from the tumor into the blood stream. Several recent studies have demonstrated that these tumors contain varying amounts of a pressor substance other than epinephrine. This substance appears to be nor-epinephrine. Some tumor extracts behave as if they contain epinephrine, mainly or exclusively; others contain mainly nor-epinephrine; and some contain approximately a 50-50 mixture of the two compounds. Some methods of differentiating the two compounds by bio-assay will be presented.

It may be presumed, though it is not definitely demonstrated, that some of these tumors liberate nor-epinephrine into circulation. Nor-epinephrine has a more potent pressor action than epinephrine (due to its weak action on vessels relaxed by epinephrine), and its pressor action is less readily blocked by adrenolytic compounds such as Dibenamine. Unlike epinephrine, moderate doses of nor-epinephrine do not produce a depressor action after Dibenamine.

The action and uses of Dibenamine, benzodioxane, etamon, and histamine in patients with phaeochromocytoma will be described.

(2)

NOTES

Cream injected into the subarachnoid space just above the lumbar enlargement - 19 cats - 30 gauge LP needle - $\frac{1}{10}$ cc - less than this amount was injected into the spinal cord substance in a few animals - some state developed somewhat more rapidly - earliest development of irritability was 5 days longest 3 weeks - persists for at least 1 year - no anatomical changes detectable grossly or microscopically - cord section just above injection site but below the top level of irritability makes the distal area anesthetic but the zone above remains irritable - removal of 1 pontal pole reduced irritability on entire contralateral side of body on both normal + irritable zone for 4 days in 1 animal - sciatic nerve trunk injections gave irritability in 2 + none in 2 - no change seen in cord potentials

(3)

(4)

The Case for Use of an Adrenergic Blocking Agent in the Routine Work-up of Patients with Arterial Hypertension.

R. J. GOULD

Essential hypertension may be more or less paroxysmal in the early stages, and adrenal chromaffin tumors not infrequently produce a sustained hypertension. About one-half to one per cent of patients diagnosed as having essential hypertension and recommended for sympathectomy are found to have adrenal medullary tumors. If the hypertension is caused by an adrenal medullary tumor, this can be determined by administration of an adrenergic blocking agent. The characteristic reactions are described in the preceding paper.

In addition to helping to establish the diagnosis of essential hypertension, information is obtained which helps in prognosis and choice of therapy.

Essential features of the procedure for testing hypertensive patients with Dibenamine will be described. This includes bases for choice of the initial dose, effects on blood pressure and heart rate with the patient supine, and finally orthostatic effects on heart rate and blood pressure after Dibenamine.

(5)

The Use of Polyethylene Tubing in Patients with Hydrocephalus.

DONALD L. STAINSBY

This paper describes the operative treatment of seven patients for hydrocephalus by shunting the cerebrospinal fluid from: 1) the ventricles to the abdominal cavity; 2) the ventricles to the external jugular vein; 3) the lumbar subarachnoid space to the lumbar epidural space; and (4) the lumbar subarachnoid space to the ureter.

(6)

The Anatomy and Physiology of the Acoustic Cortex of the Dog.

ARCHIE R. TUNTURI

The discussion includes the general arrangement of the areas of the acoustic cortex, the physiological determination of the boundaries, the arrangement of the fibers for each frequency, how each part of the cochlea is represented in the cortex, the thresholds of the observed responses, and the gross connection of the medial geniculate body to the cortex.

(4)

NOTES

Angiotonin acts directly on arterioles muscle fibers -- not effected by dibenamine -- also not epinephrine

Types of response to dibenamine --

- ① fall in BP over 1/2 hr in pt. supine - found in pt. with pheochromocytoma -
- ② prompt fall in BP on standing - essential hypertension good candidate for sympathectomy - found in normal people
- ③ slow fall in BP over 5 min. - found in impaired renal function
- ④ no fall supine or erect - for advanced hypertension, dilatation of aorta -

Dosage - 5 mgm/kilo body wt. for hypertension
2 " " if adrenal tumor suspected
given in 400 cc normal saline IV in 45-60 min.
do test 90 min. after completion of the injection -
effect persists 48 hours - miosis appears first &
disappears last - atropine & belladonna counteract side effects such as nausea & vomiting -

- ⑤ 6 children under 2 yr. - 1 adult -
3 mo. ♂ - obstructive hydrocephalus at first, commenced hydrocephalus 1 mo. later - died of bloody vomiting & diarrhea
Mitson procedure -

12:30 p. m.

Luncheon for members and guests at the Arlington Club.

2:00 p. m.

Sightseeing tour of Portland or golf at Waverley Country Club.

3:30 p. m.

Oasis at the home of Doctor and Mrs. John Raaf.

7:00 p. m.

Formal Dinner for members and guests at the Town Club.
Address: An Intimate View of Europe, by Dr. Frank Munk,
Professor of Political Science, Reed College, Portland.

TUESDAY, October 25, 1949

8:00 a. m.

Buses leave Benson Hotel for trip up Columbia River and thence to Timberline Lodge.

12:30 p. m.

Luncheon at Columbia Gorge Hotel.

2:30 p. m.

Continue trip to Timberline Lodge. The rest of the day will be devoted to recreation.

NOTES

- 4 mo. ♂ - communicating hydrocephalus - shunt to peritoneal cavity failed - Matson procedure - 4 mo. postop - pt. presented -
- 5 mo. ♀ - communicating hydrocephalus - peritoneal shunt failed, as did shunt to jugular vein, then scalp vein. Matson procedure then done - good result - pt. presented -
- 19 mo. ♂ - head enlarged at 5 mo. - communicating hydrocephalus - shunt to epidural space failed - Matson procedure - onset of vomiting, pt. died -
- 2 yr. ♀ - communicating hydrocephalus + lumbar meningocoele. Matson procedure - ~~CSF drainage~~ ^{dropped pony mass} decoring operation - died of meningitis -
- 3 1/2 yr. ♀ - cerebellar arachnoiditis - epidural shunt failed - died before further surgery -
- 6 mo. ♂ - communicating hydrocephalus - Matson procedure

(6) localized in ectosyrian zones in the dog - low frequencies in second area - 3rd area present further anteriorly - high frequencies anteriorly -

WEDNESDAY, October 26, 1949

Timberline Lodge

9:00 a. m.

Scientific Session.

(1)

Fibromyosarcoma of the Skull and Meninges.

GEORGE BAKER, Rochester, Minnesota

Primary fibrosarcomas arising from the dura are very rare. In Cushing's series of two thousand intracranial neoplasms, only three such tumors were verified. Bailey and Ingraham, in 1945, reported their experiences with three cases and found four additional ones in the literature, two of these by Cushing and one by Mallory and Wakeley.

Even though this is a rare situation, the handling of the problem from a neurosurgical standpoint seemed to be a very worth-while situation and a case report seemed advisable. A review of the history, including x-ray findings, operative findings and pathological significance, will be presented.

(2)

Spinal Intradural Tumor Simulating Disc Lesions.

EDMUND J. MORRISSEY, San Francisco, California

A series of six cases of intradural tumors involving the cauda equina is being reported. As unilateral sciatic pain aggravated by coughing and sneezing was the chief symptom and as the neurological findings were limited to slight sensory and reflex changes, root pressure from a dislocated intervertebral disc was suspected. The location of these tumors varied from the level of the second lumbar to the fifth lumbar vertebrae. The differentiation between tumors involving the cauda equina and root pressure due to a dislocated intervertebral disc is discussed.

NOTES

- ① 3 yr. ♂ - lump on skull → increased intracranial pressure + fever - now 5 mo. postop -

-
- ② 35 yr. ♂ - ependymoma
31 yr. ♀ - neurofibroma
25 yr. ♂ - meningioma
38 yr. ♀ - ependymoma
62 yr. ♀ - meningioma

Pain worse on recumbency, relieved on walking around -

(3)

Early Results of Selective Cortical Undercutting. Preliminary Report. (With moving pictures.)

WILLIAM BEECHER SCOVILLE, Hartford, Connecticut

Results of one-hundred and thirteen cases of selective cortical undercutting, divided equally into (1) superior convexity, (2) orbital surface and (3) cingulate gyrus areas of the frontal lobe, are here presented. Forty additional cases of standard lobotomy have been carried out simultaneously for controls.

Therapeutic results of operations 1 and 2 in schizophrenic patients are roughly comparable to the standard open lobotomy and in operation 3 are also comparable but to a lesser degree. Similarly, in a few cases suffering from pain, psychoneurosis or melancholia, it was found that the results were not dependent on selection of either the superior convexity or the orbital surface.

Complications have been two deaths from postoperative hemorrhage, isolated early seizures in 12% promptly aborted by dilantin and no infections. There were no gross physiologic changes even following undercutting of the cingulate or posterior orbital areas nor were there specific changes in personality and state of consciousness. There was appreciably less blunting of the total personality in selective undercutting as compared to standard lobotomy controls.

The results suggest that the therapeutic benefits following lobotomy for mental disease as well as pain are due to quantitative rather than qualitative interruption of fronto-thalamic connections. It is planned in the future to perform (1) orbital undercutting in psychoneurotic patients, (2) maximal undercutting of the superior convexity in schizophrenic patients, (3) minimal undercutting of the convexity in pain and addiction cases and (4) a second-stage standard open lobotomy in six-months' time in those schizophrenic patients failing to show sufficient improvement after selective undercutting.

(3)

NOTES

80 schizophrenics - 48% improved

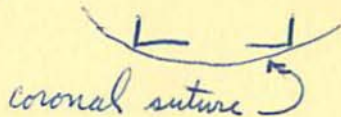
17 affective psychoses -

obsessive compulsives -

5 pain - no specificity -

2" triphines - L shaped incisions -

3 cm cortical incision -



(4)

Pulsating Exophthalmos Due to Carotid Cavernous Aneurysm.

E. HARRY BOTTERELL and JOSEPH CLUFF*, Toronto, Canada

Six cases of traumatic carotid cavernous aneurysm are presented. One was relieved by spontaneous thrombosis. The surgical treatment of the remaining five cases is discussed.

A brief review of various methods of treatment is presented including reference to surgical experience in the nineteenth century.

(5)

Treatment of Glioblastoma Multiforme with Radioactive Phosphorus.

T. C. ERICKSON, and H. F. STEELMAN*, Madison, Wisconsin

Patients having histologically-verified glioblastoma multiforme were given 2 to 25 millicuries radioactive phosphorus by different routes and in various doses in an attempt to produce local irradiation of the tumor. A followup period of six to twenty-four months was made and the survival in months compared with a control series of patients treated by surgery with and without deep x-ray therapy. The present follow-up indicates that administration of radioactive phosphorus in the doses given does not increase the life expectancy of these patients with glioblastoma multiforme.

*By invitation.

(not presented)

NOTES

(4)
 ♀ - post traumatic bilateral exophthalmos -
 spontaneous thromboses cured proptosis -
 visual acuity normal -

♂ - post traumatic - unilateral - ligation
 of internal, external + common carotid - bruit
 persists, otherwise cured -

30 yr. ♂ - post traumatic - unilateral - ligation of
 internal carotid - cured except for left 6th
 paralysis - no bruit -

36 yr. ♂ - blow on jaw - ligation of internal carotid
 bruit persisted - 3 mo. later retinal hemorrhages
 appeared - intracranial ligation proposed -

♂ - post traumatic - ligation of internal carotid -
 bruit persisted - intracranial clip applied - 6 mo.
 later visual acuity further reduced - 5 yr. further
 reduction -

8 yr. ♂ - post traumatic - internal carotid ligated
 on neck + intracranially - eye blind immediately -

Mayfield - blindness is due to ischemia of the chiasm.

(6)

Aneurysm of the Anterior Cerebral Artery; Treatment by Proximal Occlusion.

WILLIAM H. SWEET* and HANNIBAL HAMLIN*,
Boston, Massachusetts

We have selected for intracranial operation almost exclusively the aneurysms on or fed by the anterior cerebral artery, since this one of the three major cerebral arteries possesses the greatest wealth of anastomosis with the other side and may hence be occluded with less likelihood of major neurological sequel.

Eight cases of aneurysm in this category are reported; six of these were treated by intracranial operations with clipping of the artery proximal to the aneurysmal area in five. In three of the six operative cases the lesion was a small berry aneurysm; the other three had more massive arteriovenous aneurysms. The final neurological status of all six patients was either similar to or improved over that preoperatively. Operative technique and vicissitudes together with rationale for proximal occlusion will be discussed.

(7)

Intraspinal Osteochondroma: A Report of Two Cases.

F. KEITH BRADFORD, Houston, Texas

Two unusual extradural tumors, almost identical in gross and microscopic appearance, are reported. They constituted a difficult technical problem since they were firmly fixed in the midline to the posterior surface of the vertebral body and deformed the cord into an overlying crescent. Both were removed, but with a resulting increase in neurological damage.

(8)

Experiences with Unilateral Prefrontal Lobotomy for Pain.

STUART N. ROWE, Pittsburgh, Pennsylvania

This paper represents a summary of experiences with sixteen cases of unilateral lobotomy, used in the treatment of intractable pain. While the initial results were somewhat disappointing, the slight change in the technique has seemed to result in very much more satisfactory control of the patients' discomfort. The technique is briefly reviewed and its relation to the results discussed.

*By invitation.

NOTES

⑥ Boldrey - arteriogram may show only some of the feeding vessels -

⑦ 20 yr. ♂ - } spine films neg. - tumors were
40 yr. ♀ - } located half way between the inter-vertebral discs -

Murphy - does thoracic discs under local, testing motor power in legs during removal -

Sheldon - section of dentate ligaments resulted in return of motor power after paralysis had followed laminectomy

⑧ 16 patients - 12 with malignancy - cortical incision in plane of coronal suture - in first 9 the superior lateral quadrant was not extensively sectioned - 2 partial lasting relief, 1 complete lasting relief - In last 7 (all in dominant hemisphere) the cut was extended until gray matter was visualized in all quadrants - all good relief for few weeks to few months -

11:30 a. m.

Executive Session (members).

12:30 p. m.

Luncheon.

2:30 p. m.

Recreation.

7:00 p. m.

Cocktails.

8:00 p. m.

Annual Dinner (formal) . Presidential Address.

THURSDAY, October 27, 1949

Timberline Lodge

9:00 a. m.

Scientific Session

(9)

Medical Aspects of the Texas City Disaster with Special Reference to Patients Treated at the John Sealy Hospital, Galveston, Texas.

S. R. SNODGRASS, Galveston, Texas

On April 16 and 17, 1947, two ships exploded at Texas City, Texas. The first ship, containing 2300 tons of ammonium nitrate fertilizer, exploded approximately an hour after fire was discovered in the hold. Sixteen hours later the second ship, carrying 961 tons of ammonium nitrate, exploded. These explosions and subsequent fires resulted in 560 persons killed or missing, and 800 patients were hospitalized with serious injuries. Approximately three or four thousand additional persons received minor injuries. The types of injuries encountered are briefly described. Approximately three hundred patients were admitted to the John Sealy Hospital in a three-hour period following the explosion. The experiences in the management of those patients is described.

9

NOTES

(10)

Cerebral Pedunculotomy for the Relief of Involuntary Movements.

A. EARL WALKER, Baltimore, Maryland

By a cinematographic demonstration the neurological status of a patient suffering from a right-sided hemiballismus will be shown before and at intervals to one year after partial section of the cerebral peduncle. The physiological basis of the relief of the abnormal movements and the preservation of practically normal motor function will be discussed. Reference will be made to the applicability of the operative procedure in other types of involuntary movement.

(not presented)

(11)

A Classification of the Gliomas Based on the Concept of Anaplasia.

HENDRIK J. SVIEN*, Rochester, Minnesota

The glioma group of brain tumors has been restudied from the standpoint of the anaplastic concept of malignancy. Evidence is presented to indicate that the astroblastoma and glioblastoma multiforme subtypes are malignant variants of astrocytoma. This tumor group complex, astrocytoma-astroblastoma-glioblastoma multiforme, has been graded on the degree of malignancy as astrocytoma grade 1 to 4. In a similar fashion, the ependymoma-ependymblastoma group complex and the oligodendroglioma-oligodendroblastoma complex have been graded as ependymomas grade 1 to 4 and oligodendrogliomas grade 1 to 4. Tumors arising from ganglion cells have been classified as neuro-astrocytomas, grade 1 to 4. The medulloblastomas, even though their origin cannot be traced to any of the adult cells of the central nervous system, are included as a glioma entity because of their constant histologic structure and their frequency. Correlation between grade of malignancy and postoperative survival period is presented.

*By invitation.

(11)

NOTES

Mitotic figures in astrocytoma grades 3 (1 in every other high power field) and grade 4 (several in each high power field) - 75% of all gliomas.

Neuroepithelioma + papilloma of choroid plexus included in the ependymoma group - 9% of gliomas -

(12)

The Surgical Treatment of Crouzon's Disease. Report of a Case Followed Nine Years Postoperatively.

DAVID L. REEVES, Santa Barbara, California

Oxycephaly and its related anomalies have been considered the result of craniostenosis or premature closure of the cranial suture lines with the subsequent prevention of growth and development of the brain. A linear craniectomy for this condition when discovered during infancy and the morcellation procedure for the abnormality in older babies represents the necessary operation for the prevention of the sequelae of increased cranial pressure, including mental deficiency, convulsive seizures, headaches, vomiting, failing vision, and blindness as well as serious cosmetic deformity. Early recognition of the cases at the period of life when preventive operation is feasible is largely the responsibility of the family physician or the pediatrician. Unfortunately the gratifying success of the procedure has been appreciated and understood by a relatively small group of specialists. A case treated by the morcellation procedure of King and followed for nine years with satisfactory results is presented. The clinical features, pathogenesis, and evolution of the surgical treatment is discussed.

(13)

Thrombosis of the Internal Carotid Artery and Its Branches

EDWIN B. BOLDREY and EARL R. MILLER*,
San Francisco, California

A review is presented of the arteriographically-demonstrable thrombosis of the internal carotid artery and its immediate branches in our series of over four hundred arteriographic studies. The signs suggesting this diagnosis are discussed. Comments are included on possible etiologic factors and therapeutic possibilities.

*By invitation.

*25-45 yr. - 15 patients -
diabetes, arteriosclerosis, postpartum embolus,
post ictal - does stellate ganglion block
routinely in all arteriograms -*

(12)

NOTES

16 mo. ♀ - operated on at 20 mo., 2 stages -
no tantalum or polyethylene film used -

Alexander - important to resist periosteum for 1"
around the incision because otherwise bone will
grow over the polyethylene - craniotomy in infant
will close within 4 months -

(13) & unilateral middle cerebral thrombosis -
pressure on internal carotid by lateral mass of atlas
~~may~~ on turning the head may account for the
predisposition for thrombosis in this artery
whereas the external carotid rarely is involved -

Batterell - 4 pt. with non filling of middle cerebral
2 pt. had gliomas of hemisphere at autopsy -
from salizol injected into sympathetic chain in
all cases of carotid ligation -

(14)

Hydranencephaly: Clinical Diagnosis on the Basis of Six Proved Cases.

WALLACE B. HAMBY, RUTH F. KRAUSS*, and
WILLIAM F. BESWICK*, Buffalo, New York

Hydranencephaly, an autopsy curiosity, has become recognizable clinically and six cases have been identified in two years in a Children's Hospital. The malformation consists of practically complete replacement of the cerebrum by fluid within intact meninges in a normal or enlarged skull. Diagnosis can be made early by: 1) recognition of a characteristic clinical pattern; 2) transillumination of the head; 3) flat line electroencephalogram tracing; 4) fontanel puncture; and, if necessary; 5) a characteristic ventriculogram. Diagnosis is important for prognosis and not for therapy.

*By invitation.

7 cases in 3 years - behavior normal for first few weeks - then retardation is noted - enlargement of head usually appeared after a few weeks - ordinary hydrocephalics did not transilluminate nearly as well unless the cortical mantle is less than $\frac{1}{8}$ " thick - fluid clear or panthrochromic - ventriculograms done in all cases -

NOTES

EFG electrodes implanted + recordings made
for periods up to 1 week - 1 pt. lived 23 mo..

Schwartz - good angiogram -

(15)

Myelographic Demonstration of Avulsing Injuries of the Brachial Plexus—A Method of Determining the Point of Injury and Possibly of Repair.

FRANCIS MURPHEY, Memphis, Tennessee, and

JOHN W. KIRKLIN*, Rochester, Minnesota

Earlier the diagnosis of avulsion of the roots of the brachial plexus or their disruption within the intervertebral foramina has depended upon neurological findings. Upper brachial plexus injuries: segmental motor and sensory deficit of the fifth, sixth, and sometimes the seventh cervical spinal nerves, including paralysis of the serratus magnus, levator scapulae, and the rhomboids; the lesion medial to the emergence of the long thoracic and dorsal scapular nerves. Lower brachial plexus injuries: segmental sensory and motor deficit of the eighth cervical, first thoracic, and sometimes the seventh cervical spinal nerves, plus a Horner's syndrome. Since diagnosis is difficult and such lesions are at present thought to be irreparable, objective diagnostic aids would help avoid useless operations.

Myelography has been found to be a satisfactory method of demonstrating avulsion of the nerve roots from the spinal cord or tears of these nerves within the intervertebral foramen. Types of findings: 1) a pseudomeningocele or a diverticulum-like structure occupying the region of one or more of the nerve roots of the brachial plexus, indicating complete or incomplete avulsion of the nerve root from the spinal cord; 2) a blunting and distortion of the normal lateral extension of the radioopaque material within the nerve root sheath, indicating a complete nerve root tear within the intervertebral foramen.

Six cases are presented, ~~two~~³ with operative verification.

*By invitation

3 weeks to 6 mo. elapsed between
injury and myelography—

NOTES

(16)

Role of the Upper Cervical Roots in the Production of Pain in the Head and Face.

FRANK H. MAYFIELD and CURWOOD R. HUNTER*,
Cincinnati, Ohio

(17)

Simplified Approach to Pituitary Region by One and One-half Inch Trepine.

WILLIAM BEECHER SCOVILLE and ROBERT McLAURIN*,
Hartford, Connecticut

A new approach to the anterior fossa and the region of the sella turcica is described. The method employs a trephine $1\frac{1}{2}$ inches in diameter placed well laterally and immediately above the orbital ridge. This approach, which has been found to provide adequate intracranial exposure, is advocated because of its simplicity and saving in time. It has been used successfully in such procedures as removal of pituitary and suprasellar tumors, Naffziger orbital decompression, ligation of aneurysm and selective undercutting of the orbital cortex.

*By invitation.

(16)

NOTES

20 pt. with recurring hemicranial pain -
12 pt. - symptoms followed trauma - section of
upper cervical roots gave relief or marked improvement -
irritation of C2 root is believed to be mainly
responsible - tenderness over greater occipital nerve -
rotation of neck aggravated pain - methods of Rx:

- ① avulsion of greater occipital nerve -
- ② rhizotomy of C2 + 3 - bilateral in 1 pt. -
- ③ rhizotomy of C2 - no total anesthesia or analgesia

8 pt. - no trauma - 2 good results -

Raaf - 2 cases - avulsion of greater occipital nerve followed
by evidence of cord injury -

NOTES

NOTES

NOTES

MEMBERSHIP OF THE AMERICAN ACADEMY OF NEUROLOGICAL SURGERY

- BAKER, Dr. George S.—102-110 2nd Ave. S. W., Rochester, Minn.
BOLDREY, Dr. Edwin B.—University of Calif. Md. School, San Francisco, Calif.
BOTTERELL, Dr. Edmund H.—Medical Arts Bldg., 280 Bloor St. W., Toronto, Calif.
BRADEN, Dr. Spencer—1422 Euclid Ave., Cleveland, Ohio.
BRADFORD, Dr. Keith—6410 Fannin St., Houston, Texas.
BROWN, Dr. Howard A.—384 Post St., San Francisco, Calif.
COBURN, Dr. Donald F.—221 Plaza Time Bldg., Kansas City 6, Missouri
CRAIG, Dr. Winchell McK.—102-110 2nd Ave. S.W., Rochester, Minn.
ECHLIN, Dr. Francis A.—555 Park Avenue, New York City 21, N.Y.
ECHOLS, Dr. Dean H.—3503 Prytania Street, New Orleans, La.
ELVIDGE, Dr. Arthur R.—3801 University Street, Montreal, Quebec.
ERICKSON, Dr. Theodore C.—1300 University Ave., Madison 6, Wis.
EVANS, Dr. Joseph P.—Cincinnati General Hospital, Cincinnati 29, Ohio
GALBRAITH, Dr. James G.—1117 South 22nd St., Birmingham, Ala.
GRANTHAM, Dr. Everett G.—405 Heyburn Bldg., Louisville 2, Ky.
GUSTAFSON, Dr. Wesley A.—224 S. Michigan Blvd., Chicago, Ill.
HAMBY, Dr. Wallace B.—140 Linwood Ave., Buffalo, N.Y.
HERRMANN, Dr. Jess D.—521 N.W. 11th Street, Oklahoma City, Okla.
HYNDMAN, Dr. Olan—621 First National Bank Bldg., Davenport, Iowa
KEITH, Dr. William P.—Medical Arts Bldg., 170 St. George Street, Toronto, Ont.
MALTBY, Dr. George L.—203 State Street, Portland, Maine
MAYFIELD, Dr. Frank H.—2314 Auburn Avenue, Cincinnati, Ohio
McCRAVEY, Dr. Augustus—546 McCallie Avenue, Chattanooga, Tenn.
MEREDITH, Dr. John M.—1200 E. Broad Street, Richmond, Va.
MORRISSEY, Dr. Edmund J.—909 Hyde Street, San Francisco, Calif.
MURPHEY, Dr. Francis—899 Madison Avenue, Memphis 3, Tenn.
ODOM, Dr. Guy—Duke University, Durham, North Carolina
POOL, Dr. Lawrence J.—195 Ft. Washington Ave., New York 32, N.Y.
PUDENZ, Dr. Robert—2375 Oneida Avenue, Pasadena, Calif.
RAAF, Dr. John—833 S.W. 11th Avenue, Portland 5, Oregon
RANEY, Dr. Aiden—1136 West Sixth St., Los Angeles 14, Calif.
RANEY, Dr. Rupert—1136 West Sixth St., Los Angeles 14, Calif.
RASMUSSEN, Dr. Theodore B.—950 E. 59th St., Chicago, Illinois
REEVES, Dr. David L.—316 West Junipero St., Santa Barbara, Calif.
ROBERTSON, Dr. Robert C. L.—6410 Fannin St., Houston, Texas
ROWE, Dr. Stuart N.—516 Medical Arts Bldg., Pittsburg, Pa.
SCHWARTZ, Dr. Henry—600 S. Kings Highway St., St. Louis, Mo.
SCOVILLE, Dr. William B.—85 Jefferson St., Hartford, Conn.
SHELDON, Dr. C. Hunter—696 E. Colorado St., Pasadena, Calif.
SNODGRASS, Dr. Samuel R.—812 Avenue B., Galveston, Texas
SPURLING, Dr. R. Glen—405 Heyburn Bldg., Louisville, Ky.
WALKER, Dr. A. Earl—601 N. Broadway, Baltimore, Md.
WALKER, Dr. Exum B.—490 Peachtree St. N.E., Atlanta, Georgia
WEAVER, Dr. Thomas A.—34 N. Main Street, Dayton, Ohio
WHITCOMB, Dr. Benjamin B.—56 Garden St., Hartford, Conn.
WOODHALL, Dr. Barnes—Dept. of Surgery, Duke Hospital, Durham, North Carolina