Ninth Annual Meeting

of

AMERICAN ACADEMY

of

NEUROLOGICAL SURGERY

BROADMOOR HOTEL, COLORADO SPRINGS, COLORADO

OCTOBER 9, 10 and 11, 1947

Thursday, October 9, 1947

10:00 A.M.—SCIENTIFIC SESSION: (Little Theatre)

1. Presidential Address
   William Keith

2. Drill Perforation, a Simplified Technique for Ventriculography and Cerebral Biopsy.
   T. C. Erickson and H. M. Suckle (by invitation)
   A small twist drill is used to perforate the cranium and the dura mater through a simple stab wound of the scalp. Specially designed ventricular or biopsy needles can then be inserted. This technique has been used successfully in over 100 cases. No complications have been encountered and it offers several advantages over more conventional procedures.

3. Atypical Facial Neuralgia Persisting after Surgical Relief of Tic Douloureux.
   Aiden A. Raney and R. B. Raney.
   Some of the basic principles essential to an accurate evaluation of this condition are presented and discussed. Pathologic processes responsible for the discomfort are demonstrated, and effective management and relief are outlined.

4. Subarachnoid Alcohol Injection for Flexor Spasm in Paraplegias.
   Hunter Sheldon and Robert Pudenz.

5. Familial or Hereditary Sciatica.
   John M. Meredith.
   A brief report is presented of a family of six people (father and five children: two sons and three daughters), all of whom have had severe sciatica and on whom six operations with disc removals have been performed. The father was bedfast for months at a time with a severe unilateral sciatica and has since died. He was never operated upon as his illness antedated the modern treatment of sciatica. One of the daughters has a definite unilateral sciatica and has not yet been operated on. One son has had three operations for unilateral sciatica (i.e. recurrent two times, always on the same side), another son has had a single disc operation and two daughters have each had a single disc operation, one in our department, the other in another city. The third son is the only one of the six children who has never had sciatica. All the disc removals were from the 4th or 5th lumbar interspace. A review of the literature with reference to hereditary or familial sciatica is included, and a brief comment is added as to the possible causative factors in such a series of cases.

BUSINESS MEETING

1:00 P.M.—LADIES' LUNCHEON (Group Photograph)

2:30 P.M.—GROUP EXCURSION TO POINTS OF INTEREST

6:30 P.M.—COCKTAILS WITH THE PRESIDENT

7:30 P.M.—INFORMAL DINNER

Friday, October 10, 1947

9:00 A.M.—SCIENTIFIC SESSION: (Little Theatre)

SYMPOSIUM ON HEAD INJURIES. Chairman: J. P. Evans

6. Survey of Cerebral Concussion
   A. Earl Walker
   Physical Phenomena in Cerebral Trauma. Gurdjian and Lissner have demonstrated the distortion of the skull and the deformations which occur when it is struck. These studies give a physical basis for the known clinical pattern of skull fractures. Within the brain linear compression and rarefaction occur as the result of head blows but rotational

movement of the brain is much more important in the production of cerebral lacerations and contusions. Pudenz and Sheldon have beautifully demonstrated the rotatory movements of the brain and the mechanisms of subdural and subarachnoid hemorrhage. Interference phenomena occur as the result of rebound of pressure waves from the cranium opposite the site of a blow.

Physiological Phenomena. Certain portions of the brain are more susceptible to cerebral trauma than others. The supranuclear systems are more vulnerable than cranial nerve nuclei, and primary cortical projection systems are less severely affected than secondary systems.

The effect of trauma on the neurone is not agreed upon. Some authorities consider it a primary paralytic but others an excitatory phenomena. Perhaps the severity of the blow, and the preconcussive state of the animal predicate the type of neuronal effect.

Following cerebral trauma intravascular changes develop. Using a binocular microscope the pial circulation has been observed through a cranial window in the cat's head. Changes in blood flow, constriction and dilatation of vessels, vascular stasis with intravascular agglutination and transudation of plasma through the vessel wall are sequelae of cerebral trauma. These alterations are probably related to the subsequent cerebral edema.

Anatomical Histopathology. Fine neuronal changes occur after cerebral concussion. Fragmentation and dispersion of Nissl bodies, nuclear disintegration are seen immediately after concussion. Chromatolysis continues reaching a maximum in 6 to 8 days. The neurones of the lateral vestibular nuclei and tegmental nuclei are particularly affected.

7. Gunshot Wounds
   Thomas A. Weaver, Jr.
   This paper will summarize some of the factors which may be responsible for the lower morbidity and mortality in cases of penetrating craniocerebral wounds in World War II as compared with World War I. The part that early triage, improved neurosurgical equipment, chemotherapy and possibly improved surgical concepts and technique have played will be discussed.
8. Frontal and Temporal Lobe Disruptions in Acute Head Injuries
   E. Harry Botterell
9. Infections in Acute Head Injuries
   Henry Schwartz
10. Mechanisms of Head Injury (Movie)
    H. Sheldon and R. Pudenz
11. Extradural Hematoma
    John Raaf
    This paper is a study of twenty-six cases of extradural hematoma. Extradural hematoma is generally recognized as a lesion producing a moderately high mortality. The signs and symptoms in patients with extradural hematomas were studied in the hope that the presence of the hematoma might be more readily recognized, and as a consequence, surgery performed earlier. The surgical problems involved were considered, and recommendations made regarding steps in the surgical technique.
12. Acute, Subacute and Chronic Subdural Hematoma
    Francis A. Echlin
    Clinical, surgical and pathological findings in 70 operated cases of traumatic subdural hematoma with special emphasis on the subacute forms.

BUSINESS MEETING (To follow scientific session)
(Group Photograph)

1:00 P.M.—LUNCHEON
AFTERNOON FREE FOR RECREATION AND DISCUSSION

Friday, October 10, 1947 (cont.)

6:30 P.M.—COCKTAILS

7:30 P.M.—FORMAL BANQUET with address by guest of honor, Dr. Jason Mixter. "Reminiscences"

FORMAL DANCE

Saturday, October 11, 1947

9:00 A.M.—SCIENTIFIC SESSION: (Little Theatre)

13. Review of Intervertebral Discs, results of Neurosurgical and Combined Treatment.
    Robert Pudenz and C. Hunter Sheldon.

14. Brain Tumors in Childhood
    Haddow Keith, W. McK. Craig, J. W. Kernohan (by invitation)
    Presenting a statistical review of the proved brain tumors observed in children treated at the Mayo Clinic from 1907 to 1946: 25.3 per cent were in children five years of age or less; 74.7 per cent in children from 6 to 14 years of age. Of the total number of tumors 24.4 per cent were diagnosed astrocytoma, 20.1 per cent medulloblastoma, 11.2 per cent ependymoma, 7.5 per cent glioblastoma multiforme, 3.7 per cent sarcoma, 3.3 per cent ependymoblastoma, 3.3 per cent astroblastoma and 3.3 per cent adamantinoma. Other tumors representing less than 25 per cent of the total number were noted in small numbers, and will be enumerated. Astrocytomas, medulloblastoma and ependymomas were rather more common in younger children, the unusual tumors more common in the older age group.
    There will be a report of follow up studies in certain groups of patients, and a discussion of various diagnostic points.

15. Platybasia, its Prevalence and Clinical Signs
    William Beecher Scoville

16. Restricted Bi-Frontal Cortical Ablation for Treatment of Psychosis.
    J. Lawrence Pool
    Instead of prefrontal leucotomy, a segment of cortex was resected from the antero-medial aspect of each frontal lobe in four psychotic patients, three of whom were schizophrenic: one, manic-depressive. Postoperative improvement ensued in all four cases. Two have been restored to a useful home life; one has been able to return home but is not capable of useful work; while the fourth is still confined to an institution, but is now tractable instead of violent. The first two cases show marked improvement in affect and insight; the third, moderate improvement; and the fourth, only slight, during the 8 to 12 month follow-up period. It is suggested that bilateral removal of cerebral cortex from the region of Brodmann's area 9 may be a significant factor in the improved condition of these patients.

SYMPOSIUM ON INTRACRANIAL ANEURYSMS. Chairman: Dean Echols.

17. Introduction: D. Echols
18. Diagnosis: W. Scoville
    J. Garber Galbraith (by invitation)
19. Treatment: E. Boldrey
    A. Elvidge
    H. Schwartz
20. Prognosis: W. Hamby

Discussion to be opened by Rupert Raney

BUSINESS MEETING

AFTERNOON: Get away or Recreation.

MEMBERSHIP OF THE AMERICAN ACADEMY OF NEUROLOGICAL SURGERY

Addresses as of August, 1947

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