

Abstracts of Papers Appearing in  
Scientific Program

OF

THE AMERICAN ACADEMY OF NEUROLOGICAL SURGERY

OCTOBER 12, 13, 14, 1953

(2) *Intracerebral Stimulation and Recording in Ambulatory Patients*

BY: HANNIBAL HAMLIN, M.D., AND WILLIAM H. SWEET, M.D.

Cinematographic film is made up of sequences showing method of intracerebral implantation of electrodes, effects of stimulation on posture and overt behavior, and recorded alterations in electrical activity of the brain. Included are shots of a patient undergoing electrolytic interruption of points in frontal fibertracts selected on the basis of focal EEG abnormality.

(3) *Electrical Activity from Chronically Isolated Monkey Cerebral Cortex*  
*A Preliminary Report*

BY: FRANCIS A. ECHLIN, M.D.

The electrical activity was recorded from areas of monkey cerebral cortex which had been neuronally isolated, or partially isolated, three to five months previously. The investigation was designed to study particularly the spontaneous waves which were present in the partially isolated cortex and the effect of electrical stimulation, of metrazol, and of acetyl choline on this activity. The following conclusion were drawn.

CONCLUSIONS:

1. The electrical activity from the chronically partially isolated monkey cortex is very similar to that seen in monkey cortex treated with alumina cream.

2. The partially isolated monkey cerebral cortex in chronic preparations appears to be more sensitive to electrical stimulation, to intravenous metrazol, and to intravenous acetyl choline, than does normal cortex.
3. Partial isolation of nerve cells may be a factor in the etiology of focal cortical epilepsy.

(5) *Hemispherectomy in the Treatment of Convulsive Seizures and Progressive Mental Deterioration in Infantile Hemiplegia*

BY: DONALD D. MATSON, M.D.

In order to determine whether cerebral hemispherectomy is ever indicated in the treatment of hemiplegic patients with convulsive seizures and progressive mental deterioration, thorough careful analysis of one patient pre-operatively and postoperatively for a period of at least a year was decided upon before carrying the project any further. The results of this case study are to be presented.

(7) *A Method of Cordotomy*

BY: EDWARD W. DAVIS, M.D., AND KENNETH E. LIVINGSTON, M.D.

A series of 25 patients have been treated with upper thoracic cordotomy for the relief of intractable pain. In this procedure a hemi-laminectomy is done on each side leaving the spinous processes intact. After sectioning the dentate ligament, the cord is rotated in the usual manner and one blade of a small mosquito hemostat inserted directly beneath the dentate ligament for a distance of 4.5 to 5 mm. and the blade then closed. It is our impression that a more complete section of the spinothalamic tract is obtained as well as a fixed level of analgesia without fear of injury to the anterior spinal artery. There has been less postoperative discomfort in the scapular region.

(8) *Thrombosis of Superior Longitudinal Sinus*

BY: WILLIAM S. KEITH, M.D.

Thrombosis of superior longitudinal sinus caused death in two and five days respectively in two children with craniocerebral injury, without penetration or fracture. Only one closely similar incident was found in the literature. Correlation of this lesion with others less acute is discussed.

(9) *Familial Malignancy with Gliomata in Siblings*

BY: WILLIAM F. MEACHAM, M.D.

A study of a family with marked familial malignancy through the parental string. Within a period of two years, three siblings with primary gliomata and a fourth member of the family with a glioma were treated. Review of the pertinent literature discloses no similar situation in medical history. Discussion will include the clinical, pathological and genetic traits of the family group.

(13) *Neurosurgical Experiences with Diabetes Insipidus*

BY: E. HARRY BOTTERELL, M.D.

The abnormal physiology of diabetes insipidus is briefly reviewed. Recent contributions to the literature are discussed. Twenty cases of diabetes insipidus due to various causes have been treated at the Toronto General Hospital since 1930. The severity of the diuresis varied from case to case. All had obligatory polyuria with an associated polydipsia. All of those receiving posterior pituitary extracts were dramatically improved. The series is analyzed with respect to aetiological factors and associated disorders.

(16) *Peritoneal Shunt in the Treatment of Hydrocephalus*

BY: IRA JACKSON, M.D., AND S. R. SNODGRASS, M.D.

Fifty-five patients with internal hydrocephalus of varying etiology were treated by lumbar subarachnoid or ventriculo-peritoneal shunt. Eighty-nine operations were performed with multiple operations being more common in infants. The operations were associated with a low mortality and no metabolic disturbances resulted. Approximately two-thirds of patients were benefited by such operative treatment.

(17) *Lumbar Subarachnoid Peritoneal Shunt in the Surgical Management of Postoperative Suboccipital Meningoceles*

BY: HOMER S. SWANSON, M.D.

This presentation is concerned with the successful surgical management of six cases of postoperative suboccipital meningoceles by the utilization of subarachnoid peritoneal shunt procedure. The material consisted of six cases subjected to suboccipital craniectomy, who postopera-

tively developed suboccipital meningoceles associated with ventricular hypertension. Attempts were made in five of the six cases unsuccessfully to correct the suboccipital meningoceles by direct attack and subsequently lumbar subarachnoid peritoneal shunt was utilized and proved effective in controlling the ventricular hypertension. The cases consisted of two cerebellar hemangioblastomas, one acoustic neurinoma, one congenital glial cyst of the fourth ventricle, one posterior fossa arachnoiditis and one patient subjected to Torkildsen procedure in the surgical management of a pinealoma.