

7th Annual Meeting

Joint Section on Disorders of the Spine
and Peripheral Nerves
AANS/CNS

Marriott's Rancho Las Palmas Resort
Rancho Mirage, California
February 13 - 17, 1991



The 7th Annual Meeting

Joint Section on Disorders of the Spine and Peripheral Nerves

**Marriott's Rancho Las Palmas
Resort
Rancho Mirage, California
February 13 - 17, 1991**

PROGRAM SUMMARY

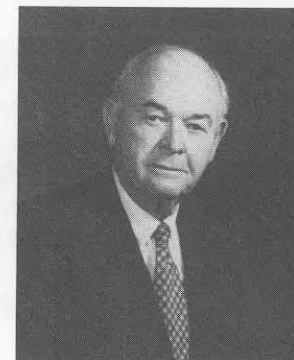
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The Joint Committee on Education of the American Association of Neurological Surgeons and the Congress of Neurological Surgeons designates this continuing medical activity for 20 credit hours in Category I toward the Continuing Education Award in Neurosurgery and the Physician's Recognition Award of the American Medical Association. The Joint Committee on Education of the American Association of Neurological Surgeons and the Congress of Neurological Surgeons is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

LIFETIME ACHIEVEMENT AWARD

Frank H. Mayfield, MD, the first recipient of the Harvey Cushing Medal by the American Association of Neurological Surgeons in 1977, was an internationally renowned neurosurgeon.

His training began at the Medical College of Virginia in Richmond. In 1937 Dr. Mayfield moved to Cincinnati to establish a community practice of neurological surgery. In 1973 the practice was named the Mayfield Neurological Institute in his honor.



Dr. Mayfield's achievements were numerous. His leadership and surgical skills provided a national, unified voice to a number of existing neurosurgical organizations. Some of his most notable achievements include the development of the model for aneurysm clips and other surgical instruments used world wide.

Other achievements include the development of the concept for corporate practice of medicine, as well as working with Ford Motor Company in the development of seat belts.

Dr. Mayfield has served on many boards and has been presented with numerous Distinguished Service Awards.

His talents as teacher and mentor have influenced neurosurgeons around the world. "He had a sense of excitement about life, about research, about opportunity and growth," says John Tew, Jr., MD, professor and chairman at the Department of Neurosurgery at University of Cincinnati College of Medicine. "He has been likened to Cincinnati's pioneering physician, Dr. Daniel Drake, because of his ability to assess situations, analyze and get people to come to consensus."

Dr. Mayfield said, "The ultimate goal of surgery is to make surgery unnecessary. The objective of surgery is to correct a problem that the human is confronted with within the realm of known technology. The idea is to study the changes in a patient so carefully that the surgeon can then hand that information to a basic scientist and say, 'See if you can find a way to achieve medically what we have achieved surgically.'"

He was the neurosurgeon's surgeon and the conscience of neurosurgery.

OFFICERS

Chairman: Edward S. Connolly, MD
Chairman-Elect: Carole A. Miller, MD
Secretary: Volker K.H. Sonntag, MD
Treasurer: Russell L. Travis, MD

Immediate Past Chairman: Stewart B. Dunsker, MD

Members-at-Large: Arnold H. Menezes, MD
Donald J. Prolo, MD

Ex-Officio: Melville P. Roberts, MD

1991 ANNUAL MEETING COMMITTEE

Scientific Program Chairman:
Nancy Epstein, MD
New Hyde Park, New York

Exhibit Chairman:
Mark N. Hadley, M.D.
Travis AFB, California

Scientific Program Committee:
Joy Arpin, MD
Cape Coral, Florida
Lawrence Borges, MD
Boston, Massachusetts
Emily Friedman, MD
Philadelphia, Pennsylvania
Ben Benner, MD
Tulsa, Oklahoma

PAST OFFICERS

1988

Stewart B. Dunsker, M.D. - CHAIRMAN
 Carole A. Miller, M.D. - SECRETARY
 Edward Tarlov, M.D. - TREASURER
 Phanor L. Perot, Jr., M.D. - MEMBER-AT-LARGE
 Volker K.H. Sonntag, M.D. - MEMBER-AT-LARGE

1987

Stewart B. Dunsker, M.D. - CHAIRMAN
 Carole A. Miller, M.D. - SECRETARY
 Edward Tarlov, M.D. - TREASURER
 Phanor L. Perot, Jr., M.D. - MEMBER-AT-LARGE
 Volker K.H. Sonntag, M.D. - MEMBER-AT-LARGE

1986

George W. Sybert, M.D. - CHAIRMAN
 Henry H. Schmidek, M.D. - SECRETARY
 Edward S. Connolly, M.D. - TREASURER
 Carole A. Miller, M.D. - MEMBER-AT-LARGE

1985

Russell W. Hardy, M.D. - CHAIRMAN
 Henry H. Schmidek, M.D. - SECRETARY
 Edward S. Connolly, M.D. - TREASURER
 George W. Sybert, M.D. - MEMBER-AT-LARGE

PREVIOUS MEETINGS

1985 - Greenlefe, Florida
 1986 - San Diego, California
 1987 - Boca Raton, Florida
 1988 - Phoenix, Arizona
 1989 - Cancun, Mexico
 1990 - Captiva Island, Florida

PAST PROGRAM COMMITTEES

- | | | | |
|------|---|------|--|
| 1985 | Barth A. Green, MD
George W. Sybert, MD | 1988 | Melville P. Roberts, MD
Volker Sonntag, MD
Russell Travis, MD
Harold A. Wilkinson, MD
Richard Saunders, MD |
| 1986 | Randall W. Smith, MD
Philip R. Weinstein, MD
John F. Howe, MD
Stanley J. Goodman, MD
Barth A. Green, MD
Volker K.H. Sonntag, MD
Hector E. James, MD | 1989 | Arnold H. Menezes, MD
Carole A. Miller, MD
Russell Travis, MD
John C. Godersky, MD
Patrick W. Hitchon, MD |
| 1987 | Volker K.H. Sonntag, MD
Robert S. Hood, MD
Joel N. Abromovitz, MD
Timothy Harrington, MD | | |

MAYFIELD AWARD

- | | | | |
|------|------------------------------------|------|--|
| 1984 | Mark N. Hadley
Phoenix, AZ | 1988 | No Award Presented |
| 1985 | Ab Guha
Toronto, Ontario | 1989 | Richard K. Simpson, Jr.
Houston, TX |
| 1986 | No Award Presented | 1990 | John Hurlbert
Toronto, Ontario |
| 1987 | John A. Feldenzer
Ann Arbor, MI | | |

EXHIBITORS

The officers and membership of the Joint Section on Disorders of the Spine and Peripheral Nerves of the American Association of Neurological Surgeons and the Congress of Neurological Surgeons appreciate the support of the following exhibitors for the 7th Annual Meeting:

AcroMed Corporation - Cleveland, Ohio

Aesculap Instrument Company - Burlingame, CA

AMS - Hayward, CA

BFW - Lexington, KY

Bremer Medical, Inc. - Jacksonville, FL

Codman & Shurtleff, Inc. - Randolph, MA

Levtech, Inc. - Jacksonville, FL

Medtronic, Inc. - Minneapolis, MN

Midas Rex - Fort Worth, TX

Pacific Coast Tissue Bank - Los Angeles, CA

PMT Corporation - Chanhassen, MN

Stuart - Greensburg, PA

Surgical Dynamics, Inc. - Alameda, CA

Thompson Surgical Instruments - Barrington, IL

ANNOUNCEMENT

The Joint Section on Disorders of the Spine and Peripheral Nerves would like to thank the following Exhibitors for their generous contributions to the Mayfield Resident Award for Spine - Spinal Cord Research.

Codman & Shurtleff, Inc
Randolph, Massachusetts

PMT Corporation
Chanhassen, Minnesota

Stuart
Greensburg, Pennsylvania

Thank you Codman & Shurtleff, PMT Corporation and Stuart for your continued support of resident education in research.

The 7th Annual Meeting Program

Marriott's Ranch Las Palmas Resort February 13 - 17, 1991

WEDNESDAY, FEBRUARY 13, 1991

Registration & Set up

12:00 p.m. - 7:00 p.m.
Registration

12:00 p.m. -
Exhibit Set Up

7:00 p.m. - 10:00 p.m.
Welcoming-Cocktails-Buffer

THURSDAY, FEBRUARY 14, 1991

Introduction

7:00 a.m. - 7:20 a.m.
CONTINENTAL BREAKFAST

7:20 a.m. - 7:25 a.m.
**Joint Section Chairman's Welcome and Presentation of
Distinguished Service Award Posthumously to Frank H.
Mayfield, MD**
Stewart B. Dunkser to accept
Edward S. Connolly, MD

7:25 a.m. - 7:30 a.m.
Meeting Chairman's Welcome
Nancy E. Epstein, MD

7:30 a.m. - 7:45 a.m.

**Presentation of Neurosurgical Complications / From
Review of Combined Section Questionnaire 1990 by
Edward Tarlov, MD**

THURSDAY, FEBRUARY 14, 1991

Session I - Instrumentation Techniques

7:45 a.m. - 9:30 a.m.

**Instrumentation Techniques: C-D System, Harrington
Rods, Luque Rods, Luque Plates, Roy Camille Plates,
Steffee Plates, C-D Pedicle Screw Fixation, Knodt Rods
and Others**

Moderator(s):

Lawrence F. Borges, MD
Asst. Prof. Surg. (Neurosurgery)
Harvard Medical School

Edward S. Connolly, MD
Clin. Prof. Neurosurgery
Tulane Univ. Sch. Med.
Assoc. Prof. Neurosurgery
LSU Sch. Med. at New Orleans
Chairman Dept. Neurosurgery
Oschner Clinic, New Orleans

7:45 a.m. - 8:00 a.m.

Cotrel-Dubousset Instrumentation

Sanford Larson, MD
Professor & Chairman
Neurosurgery
Med. College of Wisconsin

8:00 a.m. - 8:15 a.m.

CD Distraction Rods and Lumbar Instability

George W. Sybert, MD
Doctoral Faculty 1974-1988
Univ. of Florida @ Gainesville
President
SW Florida Neurosurgeons Assoc.
Fort Myers, Florida

8:15 a.m. - 8:30 a.m.

**Spinal Fixation with Steffee Plates:
Problems and Pitfalls**
Greg Bennett, MD
*Assoc. Prof. Neurosurgery
SUNY @ Buffalo*

8:30 a.m. - 8:45 a.m.

**Electrophysiologic Monitoring of Pedicle Screw
Placement in A Porcine Model**
Parley Madsen, MD
*Spine Surgery Fellow
Dept. of Neurosurgery
Univ of Miami
Barth A. Green, MD
Professor of Neurosurgery
Orthopaedics & Rehabilitation
Univ. of Miami Sch. of Medicine*

8:45 a.m. - 9:00 a.m.

**Knott Rods in Lumbosacral
Fusion-Strengths and Weaknesses**
Frances K. Conley, MD
*Prof. of Neurosurgery
Stanford University*

9:00 a.m. - 9:15 a.m.

**Pedicle Screws With Steffee Plates
for Post-Traumatic Instability**
Bennett Blumenkopf, MD
*Asst. Prof. Neurosurgery
Vanderbilt Univ. Med. Ctr.*

9:15 a.m. - 9:30 a.m.

PANEL DISCUSSION

9:30 a.m. - 10:00 a.m.

COFFEE BREAK

Session II Contributed Papers

10:00 a.m. - 1:00 p.m.

**(Twelve Papers - 10 minute presentation, 3 minute
discussion each)**

Moderator:

Elaine Joy Arpin-Sypert, MD
*Asst. Prof. Neurosurgery
Univ. Louisville (1984-88)
Asst. Prof. Neurosurgery
Montreal Neurol Institute
McGill Univ.-Montreal-Quebec
Canada (1979-83)*

10:00 a.m. - 10:15 a.m.

**The Interspinous Method of Posterior Atlantoaxial
Arthrodesis**

Curtis A. Dickman, MD
Volker K.H. Sonntag, MD
Stephen M. Papadopoulos, MD
Mark N. Hadley, MD

10:15 a.m. - 10:30 a.m.

**Anterior Cervical Reconstruction and Fusion with
Allograft Bone**

Regis W. Haid, MD
Shaun McManimon, MD
George W. Sypert, MD

10:30 a.m. - 10:45 a.m.

Lateral Mass Plating for Cervical Instability

Regis W. Haid, MD
Stephen Papadopoulos, MD
Volker K.H. Sonntag, MD

10:45 a.m. - 11:00 a.m.

**The Kostwik-Harrington Approach for Burst Fractures of
the Thoraco-Lumbar Spine**

Lawrence F. Marshall, MD
J.J. Abitol, MD
Steven Garfin, MD

11:00 a.m. - 11:15 a.m.

Anterior Decompression and Stabilization of the Thoracic and Lumbar Spine for Neoplastic Disease

Paul R. Cooper, MD
Thomas Errico, MD
Tracy DiBartolo, MD

11:15 a.m. - 11:30 a.m.

Management of Thoracolumbar Spine Fracture

Lawrence D. Dickinson, MD
Stephen M. Papadopoulos, MD
Gregory P. Graziano, MD

11:30 a.m. - 11:45 a.m.

Lateral Parascapular Extrapleural Approach to the Thoracic Spine

Richard G. Fessler, MD, PhD
Donald Dietze, MD

11:45 a.m. - 12:00 p.m.

Multi-Segment Lumbar Instability: CD Rods / Arthrodesis

Elaine Joy Arpin-Sypert, MD
George W. Sypert, MD

12:00 p.m. - 12:15 p.m.

Texas Scottish Rite Hospital Rod Instrumentation for Thoracic and Lumbar Spine Trauma

Edward C. Benzel, MD
Lee Kesterson, MD
Erich P. Marchand, MD

12:15 p.m. - 12:30 p.m.

Posterior Lumbar Interbody Fusion With and Without Steffee Plate Fixation

William B. Faircloth, MD
Joseph F. Nicastro, MD
Charles L. Branch, Jr., MD

12:30 p.m. - 12:45 p.m.

Application of Segmental Fixation Devices for Spinal Instrumentation in Thoracolumbar Trauma

Chester E. Sutterlin, MD
Ann Marie Chrin, RN
Dorrie Rossi, RN
Glen R. Rechline, RN

12:45 p.m. - 1:00 p.m.

Cotrel-Dubousset Pedicle Fixation in Oophorectomized and Nonophorectomized Canines

Chester E. Sutterlin, MD
Karen E. Warden, M., Biomed, Eng.
I.D. Farey, MD
P.C. McAfee, MD

1:00 p.m. - 2:00 p.m.

LUNCH ON YOUR OWN

1:00 p.m. - 2:00 p.m.

Executive Council Meeting
Desert Suite 1

THURSDAY, FEBRUARY 14, 1991

Session III - Cervical Spine Instrumentation Course

2:00 p.m. - 5:00 p.m.

Cervical Spine Instrumentation

Course Director:

Volker K.H. Sonntag, MD
Vice Chairman
Dept. Neurosurgery
Barrow Neurological Institute
Prof. of Surg. (Neurosurgery)
Univ. of Arizona @ Tucson

Instructors:

2:00 p.m. - 2:30 p.m.

Posterior Fusion

Volker K.H. Sonntag, MD

2:30 p.m. - 3:00 p.m.

Caspar Plating Techniques

Fred H. Geisler, MD

3:00 p.m. - 3:30 p.m.

Methyl Methacrylate Fusion Technique

Charles Leon Branch, Jr., MD

3:30 p.m. - 4:00 p.m.

Anterior Odontoid C2 and Screwing Technique

Ronald Apfelbaum, MD

4:00 p.m. - 4:30 p.m.

Anterior Fusion

George W. Sybert, MD

4:30 p.m. - 5:00 p.m.

DISCUSSION

COURSE DESCRIPTION:

Each instructor will give a 20-30 minute active session and will then demonstrate hands on models at one of the five work stations which will be set up.

FRIDAY, FEBRUARY 15, 1991

Session IV - Spondylolisthesis

7:00 a.m. - 7:30 a.m.

CONTINENTAL BREAKFAST

7:30 a.m. - 9:00 a.m.

Conservative Versus Surgical (With/Without Fusion) Management of Degenerative Spondylolisthesis and Spondylolisthesis with Lysis

Moderator(s):

Charles Fager, MD

Chairman-Emeritus

Lahey Clinic Med. Ctr.

Joseph A. Epstein, MD

Clin. Prof. of Neurological Surgery

Albert Einstein Col. of Med.

Clin. Assoc. Prof. of Surgery (NS)

Cornell Univ. Med. College

Chief-Emeritus-Div. Neurosurgery

North Shore University Hospital

Long Island Jewish Med. Ctr.

7:30 a.m. - 7:40 a.m.

Hooks, Rods, Plates and Screws - How and When to Stabilize

Charles Leon Branch, Jr., MD

Asst. Prof. Neurosurgery

Bowman Gray Sch. of Med.

7:40 a.m. - 7:50 a.m.

The Diagnosis and Management of Spondylitic Spondylolisthesis

Stewart Dunsker, MD

Prof. of Neurosurgery

Univ. of Cincinnati

7:50 a.m. - 8:00 a.m.

Degenerative Spondylolisthesis, Clinical Evaluation and Work-up

Thomas B. Ducker, MD

Clin. Prof. Div. Neurosurgery

Univ. of Maryland

Assoc. Prof. Dept. Neurosurgery

Sch. of Med. Johns Hopkins Univ.

8:00 a.m. - 8:10 a.m.

Surgical Decompression Without Fusion

Edward Tarlov, MD

Dept. Neurosurgery

Lahey Clinic Med. Ctr.

8:10 a.m. - 8:20 a.m.

The Radiological Evaluation of Patients with Degenerative Spondylolisthesis as it Influences the Indications for Surgery

Arthur Kober, MD

Prof. of Neurosurgery

George Washington Univ. Med. Ctr.

Clinic Prof. Neurosurgery

Georgetown Univ. Med. Ctr.

8:20 a.m. - 8:30 a.m.

Interbody Fusion With and Without Instrumentation in Surgical Management of Spondylolisthesis

Carole Ann Miller, MD

Clin. Prof. Dept. Surg. (Neurosurgery)

Ohio State Univ.

8:30 a.m. - 8:40 a.m.

Aggressive Non-Surgical Treatment of Degenerative Spondylolisthesis and Spondylolisthesis with Lysis

Hubert Rosomoff, MD, D. Med. Sci.

Professor & Chairman

Dept. Neurosurgery

Medical Director

Comprehensive Pain and

Rehabilitation Center

Univ. Miami Sch. of Med.

8:40 a.m. - 9:30 a.m.

PANEL DISCUSSION

9:30 a.m. - 10:00 a.m.

COFFEE BREAK

VIEW EXHIBITS & POSTERS

FRIDAY, FEBRUARY 15, 1991

Session V - Contributed Papers

10:00 a.m. - 1:30 p.m.

(Fourteen Papers - 10 minute presentation, 3 minute discussion each)

Moderator:

Benjamin G. Benner, MD

Assoc. Prof. Neurosurgery

Univ. of Oklahoma

10:00 a.m. - 10:15 a.m.

Incidence of Degenerative Spondylolisthesis in Patients With Spinal Stenosis

Paul B. Nelson, MD

Mark V. Larkins, MD

10:15 a.m. - 10:30 a.m.

The Effect of Graded Spinal Injury on the Extraparallel and Pyramidal Motor Evoked Potentials of the Rat

John Shiau, MD

R.A. Zapulla, MD, PhD

Julia Nieves, BS

10:30 a.m. - 10:45 a.m.

Reduction of Cervical Surgical Morbidity and Mortality With Intraoperative Somatosensory Evoked Potential (SEP) Monitoring

Nancy E. Epstein, MD

Dominic Nardi, MD

Joseph Danto, PhD

10:45 a.m. - 11:00 a.m.

Anterior Cervical Fusion and Caspar Plate Stabilization for Degenerative Disorders of the Cervical Spine

Iain H. Kalfas, MD

Stephen M. Papadopoulos, MD

Volker, K.H. Sonntag, MD

11:00 a.m. - 11:15 a.m.

Caspar Plate Stabilization: Indications, Results, and Complications in 80 Consecutive Patients

Stephen M. Papadopoulos, MD

Iain H. Kalfas, MD

Volker K.H. Sonntag, MD

11:15 a.m. - 11:30 a.m.

Caspar Plating for Complex Hangman's Fractures

Gerald Francis Tuite, Jr., MD

Stephen M. Papadopoulos, MD

11:30 a.m. - 11:45 a.m.

Cervical Myelopathy - Surgery for CSM and OPLL

George W. Sypert, MD

Elaine Joy Arpin-Sypert, MD

11:45 a.m. - 12:00 p.m.

The Use of Allografts in Caspar Cervical Stabilization

P.M. Klara, MD

W. Casper, MD

12:00 p.m. - 12:15 p.m.

Combined Posterior Decompression and Internal Stabilization for Cervical Spondylotic Myelopathy

Paul K. Maurer, MD

Stephen L. Ondra, MD

Bruce Van Dam, MD

12:15 p.m. - 12:30 p.m.

Focal OPLL Contributing to Osteophytic Compression in Cervical Spondylosis

Kenneth J. Murray, MD
Albert Dudley, III, MD
Howard Moses, MD

12:30 p.m. - 12:45 p.m.

Posterior Cervical Laminoforaminotomy for Radiculopathy: Review of 172 Cases

Seth M. Zeidman, MD
Thomas B. Ducker, MD

12:45 p.m. - 1:00 p.m.

Anterior Cervical Discectomy Without Bone Grafting: Radical or Simple Disc Excision

W. Michael Vise, MD

1:00 p.m. - 1:15 p.m.

Long-Term Results of Anterior Cervical Discectomy Without Fusion

Isai Yamamoto, MD
Osamu Sato, MD

1:15 p.m. - 1:30 p.m.

Incidence of Vocal Cord Paralysis Following Anterior Cervical Fusion

Bruce E. Northrup, MD
David Zwillenberg, MD

1:30 p.m. - 2:30 p.m.

LUNCH ON YOUR OWN

Session VI - Spinal Instrumentation

2:30 p.m. - 5:00 p.m.

Spinal Instrumentation Round Table Discussion

Moderator:

Sanford Larson, MD
Prof. & Chairman
Dept. of Neurosurgery
Univ. of Wisconsin

2:40 p.m. - 3:00 p.m.

Misuse and Abuse of Spinal Instrumentation

Barth Green, MD

3:00 p.m. - 3:20 p.m.

Beyond the Root

Sanford Larson, MD

3:20 p.m. - 3:40 p.m.

CD Rod Segmental Stabilization for Lumbar Segmental Instability

George W. Sybert, MD

3:40 p.m. - 4:00 p.m.

Kyphotic Deformities

Greg Bennett, MD

4:00 p.m. - 4:20 p.m.

Use of Ministabilization Procedure in the Elderly Population with a Degenerative Motion Segment in the Low Back

Frances K. Conley, MD

4:20 p.m. - 4:40 p.m.

Complications With the Use of Harrington Rods Versus Steffee Plate System for Post-Traumatic Instability

Bennett Blumenkopf, MD

4:40 p.m. - 5:00 p.m.

DISCUSSION

SATURDAY, FEBRUARY 16, 1991

Session VII - Poster Session

7:00 a.m. - 7:30 a.m.

CONTINENTAL BREAKFAST

7:00 a.m. - 8:00 a.m.

POSTER SESSION

(Each of 50 contributors will be at their posters for discussion)

POSTER #1

A Critique of the Surgical Management of Lumbar Disc Disease

Jamie Baisden, MD
Berkley L. Rish, MD
Greg Samsa, MD

POSTER #2

Spinal Cord Herniation Into a Thoracic Extradural Arachnoid Diverticulum: Case Report With Magnetic Resonance Imaging

Perry A. Ball, MD
Richard L. Saunders, MD

POSTER #3

A New Rat Spinal Cord Injury Model: A Ventral Compression Technique

Edward C. Benzel, MD
John A. Lancon, MD
Mary M. Thomas, MS
John A. Beal, PhD
Gregory M. Hoffpauir, MD
Lee Kesterson, MD

POSTER #4

The Dose-Dependent Effects of Naloxone and Methylprednisolone in the Ventral Compression Model of Spinal Cord Injury

Edward C. Benzel, MD
Gregory Hoffpauir, MD
Mary Margaret Thomas, MS
John A. Beal, PhD
John A. Lancon, MD
Lee Kesterson, MD

POSTER #5

Segmental Spinal Stimulation for Peripheral Nerve Injury Pain

Bennett Blumenkopf, MD

POSTER #6

Vertebral Hemangiomas - New Treatment Alternatives

Martin Camins, MD
Jeffrey S. Oppenheim, MD

POSTER #7

Spinal Epidural Hematoma in Hemophiliac Infant

L. Philip Carter, MD
Imre Noth, MS, III
Janet Pittman, MD

POSTER #8

Steffee Plating Impact on the Quality of Daily Living: Failures and Successes Analyzed in Patients With Chronic Benign Pain from Degenerative Spinal Disease

Guy Corkill, MD
D. Rubanowitz, MD
R. Frye, MD
J. Kimple, MD
E. McAllister, MD
E. Walker, MD
R. Corkill, MD
N. Perry, MD

POSTER #9

Somatosensory Evoked Potentials in Cervical Spinal Cord Compression

Gary C. Dennis, MD
Ozra GH. B. Dehkordi, MD
Arthur N. Cole, MD
Ovid C. Trouth, MD, PhD
Charles Mosee, MD

POSTER #10

Neurological Outcome After Spinal Cord Injury Without Radiographic Abnormalities

Curtis A. Dickman, MD
Joseph M. Zabramski, MD
Harold L. Rekate, MD
Volker K.H. Sonntag, MD

POSTER #11

Occipitocervical Fusion Utilizing a Contoured Threaded Pin

Curtis A. Dickman, MD
Volker K.H. Sonntag, MD
Richard A. Douglas, MD

POSTER #12

Antibiotic-Impregnated Methylmethacrylate in Treatment of Infections with Spinal Instrumentation

Donald D. Dietze, Jr., MD
Regis W. Haid, Jr., MD

POSTER #13

In Vivo Analysis of Catecholamines in Injured Spinal Cord

Dzung H. Dinh, MD
P.K. Mishra, PhD
William C. Olivero, MD
Brian Curtis, PhD

POSTER #14

Coexistent Traumatic Locked Facets of the Cervical Spine and Herniated Intervertebral Discs

Stephen E. Doran, MD
Stephen M. Papadopoulos, MD

POSTER #15

Traction in Spinal Cord Trauma

Thomas B. Ducker, MD

POSTER #16

Cervical Stabilization with Inter-Spinous Process Wisconsin Wiring, With and Without Combined Anterior Decompression, For Traumatic Subluxation

Kent R. Duffy, MD
Rudolph Taddonio, MD

POSTER #17

Analysis and Treatment of Post-Surgical Spondylolisthesis Following Decompressive Laminectomy

Scott C. Dulebohn, MD
Thomas G. Oravetz, MD
John P. Henderson, MD

POSTER #18

Spinal Cord Bioaminergic Response to Mechanical Trauma: An Experimental Study

Patrick O. Eghwudjakpor, MD
Hirohisa Miyake, MD
Masahiro Kurisaka, MD
Koreaki Mori, MD

POSTER #19

An Instrument for Graded Spinal Cord Compression in the Rat

Scott R. Gibbs, MD
John Oro, MD
Siavash Haghighi, PhD, D.V.M.

POSTER #20

Double Labeling of Saphenous Nerve Neuron Pool Allows Determination of Accuracy of Axon Regeneration at the Single Neuron Level

Carter Harsh, MD
Simon J. Archibald, PhD
Roger D. Madison, PhD

POSTER #21

Blood Flow Measurements by Laser Doppler Flowmetry in Injured Peripheral Nerves

Fernando Jimenez, MD
Constance M. Baron, MD
Robert H. Rosenwasser, MD

POSTER #22

Cauda Equina Avulsions Resulting from Seat Belt Flexion Distraction Injuries

Patrick A. Juneau, III, MD
Dennis P. Devito, MD
Bennett Blumenkopf, MD

POSTER #23

Microsurgical Anatomy of the Lower Cervical Spine and Cord

Yoshichika Kubo, MD
Shior Waga, MD
Tadashi Kojima, MD

POSTER #24

Review of Arnold-Chiari Type I Malformation with Suggested New Pathologic Anatomic Subgroup Classifications

Lyal G. Leibrock, MD
Francis J. Hahn, MD

POSTER #25

Subaxial Cervical Spine Fractures: Indications for Surgical Stabilization

VanBuren R. Lemons, MD
Franklin C. Wagner, Jr., MD
Pasquale X. Monesano, MD
David Baker, BS

POSTER #26

Anterior Decompression in Cervical Spine Trauma: Does the Timing of Operation Affect the Outcome?

Lion Levi, MD
Aizik L. Wolf, MD
John Ragheb, MD
Daniele Rigamonte, MD
Walker Robinson, MD

POSTER #27

Flexion-Extension MRI and CT: An Essential Combination in Evaluating the Cervical Spine of Patients with Rheumatoid Arthritis

Lucy C. Love, MD
Gary Iannitello, MD
F. Reed Murtagh, MD
Glen Rehtine, MD

POSTER #28

Clinically Evident Spinal Metastases in Primary Posterior Fossa Ependymomas

Mark K. Lyons, MD
Patrick J. Kelly, MD

POSTER #29

Primary Spinal Epidural Non-Hodgkin's Lymphoma: Analysis of Eight CT Era Cases and Review of the Literature

Mark K. Lyons, MD
Brian P. O'Neill, MD
W. Richard Marsh, MD

POSTER #30

Occipital Cervical Internal Fixation

* Dennis E. McDonnell, MD

POSTER #31

Cervicomedullary Junction Compression By Chondrocalcinosis

Loren J. Mouw, MD
Arnold H. Menezes, MD

POSTER #32

Occipital-Cervical Fixation and Fusion

B. Mullin, MD
G. Rea, MD

POSTER #33

Pain Drawing Analysis by Computerized, Patient-Interactive Spinal Cord Stimulation System

Richard B. North, MD
Daniel J. Nigrin, BA
Kim Fowler, MS
Richard Szymanski, PA
Brian Regan, BA
Steven Piantadosi, MD, PhD

POSTER #34

Spinal Cord Stimulation for Failed Back Surgery Syndrome: Five Year Follow-up

Richard B. North, MD
Matthew G. Ewend, MD
Michael T. Lawton, MD
David H. Kidd, BA
Steven Piantadosi, MD, PhD

POSTER #35

Thoracic Myelopathy Due to Remote Dural Arteriovenous Malformations

Michael G. Partington, MD
David G. Piepgras, MD
W. Richard Marsh, MD

POSTER #36

Comparison of Epidural Morphine and Epidural Hydromorphone in Patients Undergoing Lumbar Laminectomy

Glenn R. Rehtine, MD
Lucy Love, MD
Henry H. Bohlman, MD

POSTER #37

The Association of Cervical Spondylosis and Multiple Sclerosis

Daniele Rigamonti, MD
Robert Burgerman, MD
J. Michael Randle, MD

POSTER #38

Penetrating Injuries Restricted to the Cauda Equina: A Retrospective Analysis

Daniel P. Robertson, MD
Richard K. Simpson, MD, PhD
Raj Narayan, MD

POSTER #39

Posterior Wiring Without Bony Fusion in Traumatic Dislocations of the Mid to Lower Cervical Spine

Hans Saveland, MD
Lennart Brandt, MD
C. Feldborg-Nielsen, MD
W. Wingstrand, MD

POSTER #40

Chromosome Translocation and Familial Transmission in Segmental Neurofibromatosis

Ricardo Segal, MD
Sharon L. Wenger, PhD
Ian Pollack, MD

POSTER #41

Results of Anterior Cervical Microdiscectomy Without Fusion in Patients With Soft Disc Herniation

Robert B. Snow, MD, PhD

POSTER #42

Cervical Myelopathy Due to the Calcification of Yellow Ligaments - Clinical Analysis of 92 Cases

Kazunori Takahashi, MD

POSTER #43

How Do You Manage the Multicentric Tumor?

Kazunori Takahashi, MD

POSTER #44

Microsurgical Transpedicular Approach for Thoracic Intervertebral Disc Herniations

Kevin J. Tracy, MD
Robert B. Snow, MD

POSTER #45

Diagnostic Potential of Contrast MRI in Lumbar Schwannomas

V.G. Wagle, MD
J.C. Collias, MD
W. Druckemiller, MD
D. Kvam, MD

POSTER #46

Subdural Empyema of the Cervical Spine: Clinicopathologic Correlates

Martin H. Weiss, MD
Michael Levy, MD
Brian Wieder, BS
John Schneider, MD

POSTER #47

Results of Anterior Cervical Discectomy and Fusion for Benign Disease of the Spine

Irene Willingham, MD
Laurie Monroe, BS
Glenn W. Kindt, MD

POSTER #48

Anterior Cervical Discectomy and Fusion With a Sculpted, Reversed Graft

Seth M. Zeidman, MD
Randy Davis, MD

POSTER #49

Enhancing Spinal Cord Lesions in AIDS: Results of Open Biopsy

Seth M. Zeidman, MD
Justin C. McArthur, MBBS, MPH

POSTER #50

Extreme Rotatory Atlanto-Axial Displacement Without Fixation: A Case Report

John Zinkel, MD
Robert E.M. Ho., MD

SATURDAY, FEBRUARY 16, 1991

Session VIII - Steroids and Spinal Cord Injury

8:00 a.m. - 9:00 a.m.

Discussion of Steroids and Spinal Cord Injury

Moderator(s):

Phanor Perot, MD
Prof. & Chairman
Dept. of Neurosurgery
Med. Univ. So. Carolina

Volker K.H. Sonntag, MD
Vice Chairman
Dept. Neurosurgery
Barrow Neurological Instit.
Prof. Surgery (Neurosurgery)
Univ. Arizona @ Tucson

8:00 a.m. - 8:10 a.m.

The Basic Science Behind the Use of Steroids in Spinal Cord Injury

Fred H. Geisler, MD
Chief-Neurosurgery
Patuxent Medical Group
Columbia Free-State Med. Plan

8:10 a.m. - 8:20 a.m.

Clinical Applications of the "Steroid" Study

Volker K.H. Sonntag, MD
Vice Chairman
Dept. Neurosurgery
Barrow Neurological Instit.
Prof. Surg. (Neurosurgery)
Univ. Arizona @ Tucson

8:20 a.m. - 8:30 a.m.

NASCIS Trial Methylprednisolone and Nalaxone

William F. Collins, Jr., MD
Harvey & Kate Cushing
Prof. of Neurosurgery
Chairman Dept. Surgery (NS)
Yale Univ. Med. Center

8:30 a.m. - 8:40 a.m.

Conflicting Data: Scientific Publishing Versus Press Releases

Thomas B. Ducker, MD
Clin. Prof. Div. Neurosurgery
Univ. Maryland
Assoc. Prof. Dept. Neurosurgery
Sch. Med. Johns Hopkins Univ.

8:40 a.m. - 9:00 a.m.

DISCUSSION

SATURDAY, FEBRUARY 16, 1991

Session IX - Far Lateral Disc Hemiations

9:00 a.m. - 10:30 a.m.

Symposium on Different Surgical Approaches to Far Lateral Disc Hemiations

Moderator(s):

Nancy E. Epstein, MD
Asst. Clin. Prof. Surg. (Neurosurgery)
Albert Einstein College of Med.
Adjunct Clin. Asst. Prof. Surg. (NS)
Cornell Univ. Med. College
Clin. Instructor Neurosurgery
New York Univ. Med. Ctr.

Thomas B. Ducker, MD
Clin. Prof. Div. Neurosurgery
Univ. Maryland
Assoc. Prof. Dept. of Neurosurgery
Sch. Med. Johns Hopkins Univ.

9:00 a.m. - 9:10 a.m.

The Management of Far Lateral Disc Herniations

Joseph C. Maroon, MD

Prof. Neurosurgery

Med. Col. of Pennsylvania

9:10 a.m. - 9:20 a.m.

Surgical Approaches to Far Lateral Disc Herniation

Robert S. Hood, MD

Clin. Asst. Prof. of Neurosurgery

Univ. of Utah

9:20 a.m. - 9:30 a.m.

Mechanical Alterations Induced by Lateral Nerve Root Exposure in the Lumbar Spine

Joseph F. Cusick, MD

Prof. of Neurosurgery

Med. College of Wisconsin

9:30 a.m. - 9:40 a.m.

Far Lateral Discs: What is the Clinical Picture

Thomas B. Ducker, MD

Clin. Prof. Div. Neurosurgery

Univ. of Maryland

Asoc. Prof. Dept. Neurosurgery

Sch. Med. Johns Hopkins Univ.

9:40 a.m. - 9:50 a.m.

Lateral Disc Herniations

John A. Jane, MD

Prof. & Chairman

Dept. of Neurosurgery

Univ. of Virginia

9:40 a.m. - 10:15 a.m.

PANEL DISCUSSION

10:15 a.m. - 10:30 a.m.

Collection of Participant's Evaluation Forms for Category I Credit for Continuing Education Award in Neurosurgery Under the Joint Sponsorship of the Joint Committee on Education of the AANS and the CNS

10:30 a.m. - 10:45 a.m.

COFFEE BREAK

Session X - Contributed Papers

10:45 a.m. - 1:15 p.m.

(Ten Papers - 10 Minute Presentation, 3 Minute Discussion Each)

Moderator:

Lawrence F. Borges, MD

Asst. Prof. of Surgery (NS)

Harvard Med. School

10:45 a.m. - 11:00 a.m.

Radical Unilateral Facetectomy With Unilateral Interbody Fusion: Preliminary Experience With An Alternative Treatment for Foraminal Lumbar Disc Herniation

Morris Senegor, MD

11:00 a.m. - 11:15 a.m.

Extensive Exposure for Far Lateral Disc Rupture With Preservation of the Articular Processes

Roger Thorne, MD

Thomas Waltz, MD

Michael Starr, MD

11:15 a.m. - 11:30 a.m.

Ambulatory Lumbar Microsurgical Discectomy

David A. Roth, MD

11:30 a.m. - 11:45 a.m.

Prospective Evaluation of NonDiscal Foraminal Pathology Causing Sciatica

Lawrence F. Borges, MD

11:45 a.m. - 12:00 p.m.

Laser-Assisted Percutaneous Lumbar Discectomy

Jordan K. Davis, MD

12:00 p.m. - 12:15 p.m.

The Pathological Basis of Central Cord Syndrome in Three Patients

Michael Egnor, MD
Barth Green, MD
Robert Quencer, MD
Michael Norenberg, MD
Richard Bunge, MD

12:15 p.m. - 12:30 p.m.

Spinal Epidural Abscesses

Eric Nussbaum, BS

12:30 p.m. - 12:45 p.m.

Magnetic Resonance Imaging of the Transverse Atlantal Ligament: Assessment of Upper Cervical Instability

Curtis A. Dickman, MD
Alexander M. Mamourian, MD
Volker K.H. Sonntag, MD
Burton P. Drayer, MD

12:45 p.m. - 1:00 p.m.

Comparative Anatomic Evaluation of Surgical Approaches to the Upper Thoracic T1-T4 Vertebrae

Donald D. Dietze, Jr., MD
Richard G. Fessler, MD, PhD

1:00 p.m. - 1:15 p.m.

New Horizons in Surgical Treatment of Syringomyelia-Microneuroendoscopic Laser-Assisted Endocavemeal Syringostomy

N. Huwel, MD
V. Urban, MD
G. Fries, MD
A. Perneczky, MD

1:15 p.m. - 1:20 p.m.

Mayfield Award Presentation by Donald J. Prolo, MD

1:20 p.m. - 1:35 p.m.

Mayfield Award Research Paper:

Embryonic Spinal Cord Transplantation: An Electrophoretic Analysis of Graft Viable Tissue

Peter Griffin Gianaris, MD
Pal Knepper, MD, PhD
Joseph Maroon, MD
Christopher Rumana, MD
Julian E. Bailes, MD
David McLone, MD, PhD

1:35 p.m. - 2:00 p.m.

ANNUAL BUSINESS MEETING

EVENING ANNUAL BANQUET

SUNDAY, FEBRUARY 17, 1991

7:00 a.m. - 7:30 a.m.

CONTINENTAL BREAKFAST

Session XI - Poster Session

7:00 a.m. - 8:00 a.m.

(Authors Will Be At Posters For Discussion)

Session XII - Tethered Spinal Cords

8:00 a.m. - 9:30 a.m.

Tethered Cord Syndrome In Adults

Moderator(s):

Emily D. Friedman, MD
Asst. Prof. Neurosurgery
Hosp. of the Univ. of Pennsylvania

John Shillito, Jr., MD
Prof. of Neurosurgery
Harvard Med. School

8:00 a.m. - 8:10 a.m.

Tethered Boobytraps

John Shillito, Jr., MD

Prof. of Neurosurgery

Harvard Med. School

8:10 a.m. - 8:20 a.m.

Tethered Cord Syndrome in Adults - Unusual Clinical Presentations

Dachling Pang, MD

Assoc. Prof. of Neurosurgery

Univ. of Pittsburgh

Chief-Ped Neurosurgery

Children's Hospital of Pittsburgh

8:20 a.m. - 8:30 a.m.

The Pathophysiology of the Tethered Cord Syndrome

William O. Bell, MD

Asst. Prof. of Neurosurgery

Bowman Gray Sch. of Med.

8:30 a.m. - 8:40 a.m.

The Spectrum and Management Options in the Adult Tethered Cord Syndrome

Arnold H. Menezes, MD

Prof. of Neurosurgery

Univ. of Iowa Hospitals & Clinic

8:40 a.m. - 9:00 a.m.

PANEL DISCUSSION

9:00 a.m. - 9:30 a.m.

COFFEE BREAK

Session XIII - Contributed Papers

9:30 a.m. - 1:00 p.m.

(Ten Papers - 10 minute presentation, 3 minute discussion)

Moderator:

Emily D. Friedman, MD

Asst. Prof. of Neurosurgery

Hosp. of the Univ. of Pennsylvania

9:30 a.m. - 9:45 a.m.

Cerebral Blood Flow Following Release of Tethered Spinal Cord

Donald H. Reigel, MD

Ricky Kortyna, PA-C

Matthew R. Quigley, MD

9:45 a.m. - 10:00 a.m.

Intraoperative Measurement of Spinal Cord Blood Flow During Tethered Cord Release

Alan D. Rosenthal, MD

Steven J. Schneider, MD

Burt M. Greenberg, MD

10:00 a.m. - 10:15 a.m.

Resolution of Scoliosis in Pediatric Chiari Malformations Without Myelodysplasia

Michael G. Muhonen, MD

Arnold H. Menezes, MD

Paul D. Sawin, BS

10:15 a.m. - 10:30 a.m.

Postoperative Evaluation of Syringomyelia by MRI Flow Determinations

Mark E. Harris, MD

Daniel L. Barrow, MD

James C. Hoffman, MD

10:30 a.m. - 10:45 a.m.

Magnetic Resonance Imaging (MRI) Evaluation of Laminectomy for Multilevel Spondylosis or Stenosis in Traumatic Central Cord Syndrome (CCS)

Mark Monasky, MD

Aizik Wolf, MD

Leslie Sebring, MD

Stuart Mirvis, MD

Eric Nussbaum, MD

10:45 a.m. - 11:00 a.m.

The Utility of Low Field MR With Open Design in Acute Spinal Trauma

Ronald J. Ignelzi, MD

11:00 a.m. - 11:15 a.m.

The Histology of Non-Neoplastic gd-DTPA Enhancing Intramedullary Cord Lesions

Donald O'Rourke, MD

Emily D. Friedman, MD

11:15 a.m. - 11:30 a.m.

The Relevance of Myelogram/CT Scan Information After MRI Scanning in Preoperative Patients with and Lumbar Disc Disease

Seth M. Weingarten, MD

Philip Hahn, MD

Elton James Tourje, MD

11:30 a.m. - 11:45 a.m.

Intraoperative Sonography of Cervical Spinal Cord Injury

Fred H. Geisler, MD, PhD

Stuart E. Mirvis, MD

11:45 a.m. - 12:00 p.m.

Neurosonography in Lumbar Disc Disease

Jack Wilberger, MD

Dan Loesch

Joseph C. Maroon, MD

12:00 p.m. - 12:15 p.m.

Intraoperative Digital Angiography in Treatment of Spinal AVMs

Eric J. Woodward, MD

Daniel L. Barrow, MD

Rodney D. Anderson, MD

12:15 p.m. - 12:30 p.m.

Herniated Thoracic Discs: Operative Procedures and Clinical Results

Todd Ridenour, MD

Souheil Haddad, MD

Patrick Hitchon, MD

John C. Van Gilder, MD

Arnold Menezes, MD

V.C. Traynelis, MD

12:30 p.m. - 12:45 p.m.

Interparenchymal Spinal Cord Pressure Measurements and Evoked Potentials During Progressive Cord Compression

Michael J. Burke, DVM, MD

Robert Breeze, MD

Leisha Osborn, R/EEG/EP Tech

Laurie Monroe, BS

Jeff Beel, PhD

12:45 p.m. - 1:00 p.m.

The Management of Ewing's Sarcoma of the Spine: Report of 7 Cases

Melhem J.A. Sharafuddin, MD

Fuad S. Haddad, MD

Dept. of Internal Medicine

Patrick W. Hitchon, MD

Suheil F. Haddad, MD

* Called To Saudi Arabia