

Intraoperative Neurophysiology in Neurosurgery: The Essentials

EANS Symposium

Verona , June 14-16th 2015

Sunday June 14, Introduction and Brain surgery

8.15-8.30 Welcome

Session I: An introduction to Intraoperative Neurophysiology

8.30-8.50 Neurosurgeon, Neurophysiologist, Anesthesiologist: Communication strategies in the operating room (D. McDonald)

8.50-9.10 Anesthesia for Intraoperative Neuromonitoring (J. Malcharek)

9.10-9.20 Discussion

Session II: Correlation between functional pre-surgical mapping and intraoperative cortical/subcortical stimulation

9.20-9.40 Functional MRI (A. Bizzi)

9.40-10.00 Transcranial Magnetic Stimulation (F. Ringel)

10.00-10.20 Diffuse tensor imaging (K. Ricciardi)

10.20-10.40 Discussion

10.40-11.10 Coffee Break

Session III: Intraoperative cortical mapping in brain tumor surgery

11.10-11.35 Phase reversal and general principles in cortical and subcortical electrophysiology (A. Szelenyi)

11.35-12.00 Cortical Mapping for language and other cognitive functions in awake patients (H. Duffau)

12.00-12.15 Cortical mapping for language in asleep patients: What can be done? (V. Deletis)

12.15-12.35 Cortical mapping for motor function (L. Bello)

12.35-13.15 **Round table discussion on cortical mapping**

13.15-14.30 Lunch

Session III: Subcortical mapping and MEP monitoring in brain tumor surgery

14.30-14.50 Surgical anatomy of subcortical pathways (S. Sarubbo)

14.50-15.10 Subcortical mapping for language and other cognitive functions in awake patients (M. Skrap)

15.10-15.30 Subcortical mapping and monitoring of visual pathways (A. Korn)

15.30-16.00 Subcortical motor mapping and motor evoked potential monitoring in brain tumor surgery: Getting to the edge (A. Raabe, K. Seidel)

16.00-16.45 **Round table discussion on subcortical mapping and MEP monitoring**

16.45-17.15 Coffee break

17.15-17.55: Key-note Lecture (introduced by M. Scerrati)

Mapping and monitoring during thalamic and basal ganglia surgery (D. Sakas)

17.55-18.10 In memoriam of A. Bricolo (introduced by F. Sala)

Day 2: Spine and Spinal Cord Surgery

7.45-8.45 Breakfast sessions on IOM in Brain Surgery: How I do it ("meet the experts").

a) Low grade gliomas (H. Duffau, L. Bello)

b) Insular tumors (M. Skrap)

c) Aneurysms and AVMs (J. Schramm, A. Raabe)

d) Intramedullary spinal cord tumors (J. Brotchi, K. Kothbauer)

Session IV: IOM in cerebrovascular surgery

9.00-9.20 MEP and SEP monitoring in aneurysm and AVM surgery: Neurophysiological perspective (A. Szelenyi)

9.20-9.40 MEP and SEP monitoring in aneurysm and AVM surgery: Neurosurgical perspective (A. Raabe)

9.40-10.00 Discussion

10.00-10.30: Special ESSFN Lecture: Neuromonitoring in DBS

10.30-11.00 Coffee Break

Session V: Techniques in spinal cord monitoring

11.00-11.15: SEP Monitoring and dorsal column mapping (P. Costa)

11.15-11.35 Muscle MEP and D-wave monitoring (V. Deletis)

11.35-11.45 Discussion

11.45-12.15 Intraoperative neurophysiological monitoring and mapping of the cauda equina (V. Deletis)

12.15-13.30 Lunch

Session VI: Neuromonitoring during surgery of the spine and the spinal cord

13.30-13.50 Spine surgery (F. Porchet)

13.50-14.10 Intradural extramedullary tumors (F. Servadei)

14.10-14.30 Neuromonitoring in acute spinal cord injury (P. Costa)

14.30-15.00 **Key-note Lecture:** The evolution of intramedullary spinal cord tumor surgery (J. Brotchi)

15.00-15.20 Spinal cord tumor surgery: What have we learned from neuromonitoring (K. Kothbauer)

15.20-15.40 **Round table discussion on spine and spinal cord surgery**

15.40-16.10 Coffee break

16.10-16.40 **Key note Lecture:** The history, development and present role of IOM in functional neurosurgery (J. Schramm)

Session VII: Surgery of the conus-cauda region

16.40-17.10 Selective dorsal rhizotomy for spasticity (R. Abbott)

17.10-17.40 Tethered cord surgery: improving results through IOM (D. Pang)

Day 3: Posterior Fossa Surgery and Controversies in Neuromonitoring

7.45-8.45 Breakfast sessions on IOM in Spinal Cord Surgery and Posterior Fossa Surgery: How I do it ("meet the experts")

a) How to set-up a Neuromonitoring Unit (V. Deletis, A. Szelenyi)

b) Tethered cords (D. Pang)

c) Selective dorsal rhizotomy and other ablative procedures (R. Abbott, M. Sindou)

d) Brainstem and skull base tumors (C. Strauss, M. Arraez)

Session VIII: Techniques in posterior fossa monitoring

9.00-9.15 Brainstem Auditory Evoked Potentials (M. Guerit)

9.15-9.35 Cranial nerve monitoring (corticobulbar MEP) (I. Fernandez-Conejero)

9.35-9.55 Mapping of the floor of the fourth ventricle (J. Sernthein)

9.55-10.15 Discussion

10.15-10.45 Coffee break

Session IX: IOM in posterior fossa surgery

10.45-11.10 Vestibular schwannomas (C. Strauss)

11.10-11.35 Functional surgery of cranial nerves (M. Sindou)

11.35-12.00 Skull base and brainstem tumors (M. Arraez)

12.00-12.30 Discussion

12.30-13.30 Lunch

Session X: Critical aspects of Neuromonitoring: Round table discussion

13.30-13.45 Introduction to Round Table discussion (F. Sala):

Topics: Evidence based neuromonitoring, Cost-effectiveness of neuromonitoring, Training and Credentials in neuromonitoring (Who does what), Medico legal aspects of neuromonitoring

15.00 – 15.15 Conclusions, end of the Symposium