Congress of Neurological Surgeons

Minimally Invasive Cranial Course

March 14, 2020 • La Jolla, California

Course Directors

Issam A. Awad, Thomas L. Beaumont

Faculty

Alexander A. Khalessi, Peter C. Warnke

Course Description

This course is designed for general practicing neurosurgeons who wish to introduce or expand the use of minimally invasive technologies and approaches to their cranial practice. This one-day intensive course will include a combination of lectures, case-based discussions and hands-on laboratory experience. Topics covered: stereotactic navigation, endoscopic evacuation of ICH, exoscopic techniques for subcortical surgery, and laser interstitial thermal therapy (LITT) for epilepsy and oncology indications.

Learning Objectives

Upon completion of the course, attendees will be able to:

- Evaluate spontaneous intracranial hemorrhage patients in terms of selection criteria for potential surgical management and apply case planning principles
- Develop hands-on cadaver training experience for endoscopic evacuation of intracerebral hemorrhage
- Gain familiarity with modern stereotactic navigation principles, relevant fascicular anatomy, and exoscopic technology platforms to facilitate sub-cortical surgery for varying pathologies and approaches
- Identify indications for LITT management for epilepsy and oncology patients and review illustrative case examples

Accreditation

The Congress of Neurological Surgeons is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Credit Designation Statement

The CNS designates this live activity for a maximum of **8.5** ***AMA PRA Category 1 Credits***. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Agenda

Friday, March 13

6:00 – 9:00pm
Course Dinner

Saturday, March 14

7:00 – 7:30am
Breakfast

7:30 – 8:00 am
Introduction, Overview, Course Logistics
Alexander A. Khalessi

8:00 – 9:00am
Minimally Invasive Surgeries for Cerebral Hemorrhage
Issam A. Awad

9:00 – 9:30am
Endoscopes, Exospcopes and Parafascicular Approaches
Thomas L. Beaumont

9:30 – 10:00am
Laser Fiber Thermoablation Techniques and Applications
Peter C. Warnke

10:00 – 10:30am
Snack/Beverage Break

10:30am – 12:30pm
Hands on Lab Rotations

12:30 – 1:00pm
Lunch

1:00 – 5:00pm
Hands on Lab Rotations

Neuro-Navigation, Registration, Exoscope Principles – Invited + local faculty

This laboratory rotation will be sub-divided into stations with groups of 2-4 participants (40 minutes each)

- BrainLab Navigation Platform with frameless planning and stereotactic biopsy or lead placement approaches on simulated cranial model with special consideration to trajectory planning
- Medtronic Stealth Navigation Platform with Optical and E/M registration methods for navigated intraventricular catheter placement and trajectory planning
- OrbEye Exoscope use on Model Heads for exploration of conventional cranial approaches
- Synaptive Robotic Integration of Navigation and Exoscope Visualization on Cranial Model

Endoscopic Evacuation of ICH – Invited + Local faculty

- Didactic on Physics of Endoscopy with Inservice on Endoscope set-up, calibration, room orientation and aspiration technology approaches with working channel limitations (30 minutes)
- Didactic with Illustrative Case Reviews emphasizing trajectory approaches, patient selection criteria, hemostasis strategies and post-operative care (30 minutes)
- Overview of Length of Stay and Outcomes Data supporting endoscopic management of ICH (30 minutes)
- Cadaver Head Stations for Hands on Training of endoscopic evacuation model (Maximum 3 participants to a cadaver head) (90 minutes)

LITT – Invited + local faculty

- Didactic on Physics of LITT therapy, Patient Selection, Case and Dose Planning (30 minutes)
- Didactic on Illustrative Case Examples in Neuro-Oncology (30 minutes)
- Didactic on Illustrative Case Examples in Epilepsy (30 minutes)
- Monteris Platform for Case Planning and LITT on simulated cranial model (two stations minimum) (45 minutes)
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