UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Neurosurgery

2122-5-H4102D032-H4102D129M

Aims

To understand the physiopathology of

- intracranial hypertension

- CSF dynamic

- cerebral blood flow

- spinal biomechanics

that subtend the main neurosurgical diseases.

To learn the nosology, the clinical expression and the treatment of the main neurosurgical diseases acquiring basic knowledge of pre and intraoperative technological devices.

Contents

Detailed program

- Physiopathology of brain and spine neurosurgical conditions

- Primary and secondary brain and spine tumors

- Cerebrovascular diseases (Aneurysms, AVMs, Cavernous angiomas, dural arteriovenous fistula)

- Hydrocephalus

- Monitoring and Surgical treatment of traumatic brain injury

- Surgical tretament of ischemic/hemorrhagic stroke (indications to treatment and outcome)

- Traumatic, degenerative and main malformative spine conditions

affecting the spinal cord and roots

- Peripheral nerve surgery

-Principles of functional neurosurgery in the treatment of movements disorders, epilepsy, pain, neurovascular conflicts.

-Principles of pre and intra-operative image guided surgery and advance intraoperative neuro-monitoring and direct brain mapping (awake surgery)

Prerequisites

Knowledge of neuo-anatomy, neurohysiology, biochemistry, pharmacolgy and neurology

Teaching form

Frontal lessons with discussion of clinical cases through a problem based learning approach

Textbook and teaching resource

Same material of the Neurology Unit + pdf of dedicated papers

Semester

Assessment method

Oral exam

Office hours