

CASE STUDY

SUCTION / STIMULATION SYSTEM FOR BRAIN SURGERY

Problem – Challenge

Microsurgical brain tumor resection requires maximal precision from the very beginning to the end. An electrical stimulation probe is thereby commonly used to track the origin of peripheral nerves and avoid impairment. Such stimulation is traditionally applied by an additional member of the operating room team or in-between the resection steps by the surgeon. As a result, such approach requires additional personnel and/or time and more importantly the second instrument interferes with the surgeons view and may increase coordination problems.

Solution

An all-in-one disposable surgical suction tube and stimulation probe has been developed and successfully tested by inomed Medizintechnik AG (Emmendingen DE) in collaboration with the team of Prof. A. Raabe of the University Hospital Bern. As a result, the subcortical mapping is fully synchronized with suction/resection. No change of instruments is required during the procedure. The combination of a surgical suction tube and a stimulation probe allows suction during tumor resection and also enables the simultaneous continuous dynamic mapping of the corticospinal tract, leading to higher precision and time saving. In 2016 this “Mapping Suction Probe by Raabe” has been awarded as winner of the German Industry Award „Industriepreis 2016“ in the Medical Technology category.

