

**THE MICROSURGICAL ANATOMY OF THE TEMPORAL LOBE: IT'S RULE IN EPILEPSY SURGERY**

GUSTAVO RASSIER ISOLAN; MARCELO MARTINS DOS REIS; MARINO BIANCHIN; AUGUSTO BRAGATHI; CAROLINA TORRES; MATEUS FRANZOI; ATAHUALPA CAUE STRAPASSON

Complex partial seizures of the temporal lobe origin corresponds to around 70% of all patients with drug-resistant epilepsy referred to surgical treatment. The surgical procedures to treat epilepsy disorders, in special temporal lobe epilepsy, had a powerful impact in the quality of life of epileptical patients. The deep anatomical knowledge is paramount to perform a safe resection of the temporal lobe structures. When different angles of view, not only conventional anatomy but also microsurgical anatomy perspective, are studied, and unconventional dissection techniques, as fiber dissection, are performed, the safety of the procedure is increased due to the improvement of the see-through X-ray knowledge. Objective: The relevant anatomy regarding the selective amygdalohippocampectomy via unconventional and conventional techniques dissections of the brain. Methods: 20 human brains fixed in formalin and 6 cadaveric heads fixed in Carolina's perfect solution® were dissected using 3X to 40X of the surgical microscope. The non-injected brains were used to perform fiber dissection technique according with the Klinger description in five brains and coronal, sagittal, and axial slices for the other five brains. Each cadaveric head was placed in a Sugita head-holder and extended and rotated to simulate the surgical position. The pterional craniotomy and the selective amigdalohippocampectomy was performed according to Yaşargil. Results: The temporal lobe and its relationships are presented and the epilepsy surgical procedures are discussed based on this anatomy. Conclusions: The complex temporal lobe anatomy regarding the selective amygdalohippocampectomy and its variations must be fully understood through different anatomical perspectives to avoid damage to vital structures.