SURG-09. REACTIVATION OF HERPES SIMPLEX VIRUS AFTER NEUROLOGIC SURGERY
Carlos Almeida Jr, Bruna Minniti Mançoano, Seila Israel Prado, Gisela Caravina Almeida, Fernanda Magalhães Souza, and Lucas Dias Lourenço; Barretos’ Children and Young Adults Cancer Hospital, Barretos, Sao Paulo, Brazil

BACKGROUND: Herpes simplex virus encephalitis (HSVE) is a rare complication after neurosurgery, and its clinical picture mimics features of other frequent postoperative complications of bacterial origin. Probably, the triggering factors are manipulation and surgical stress, since most cases occur due to reactivation rather than primary infection. The main symptoms include fever and altered consciousness. DNA identification of HSV by PCR has advantages over other methods such as tissue diagnosis and cerebrospinal fluid (CSF) analysis due to a mortality of 30%, and potential neurologic sequelae such as cognitive and motor dysfunction. CASE REPORT: An 18-year-old male patient presented with loss of vision due to cystic craniopharyngioma. We inserted an Omaya catheter and drained the cyst. On the third day, he presented with fever, seizures, and decreased consciousness. Magnetic resonance imaging (MRI) showed high signal intensity on T2-weighted and FLAIR images in the frontal and temporal lobes, cingulate gyrus, and corpus callosum, with mass effect. He was submitted to decompressive craniectomy and empirical antibiotic therapy. CSF and blood cultures were negative. Due to inexpressive clinical improvement after 48 hours, CSF was collected for polymerase chain reaction (PCR), and we performed a brain biopsy and started intravenous acyclovir. Histology and PCR confirmed HSVE type 1 and 2. He received antimicrobial therapy with a mortality of 30%, and potential neurologic sequelae such as cognitive and motor dysfunction. CONCLUSION: Clinical suspicion, CSF PCR, and imaging are of paramount importance for early diagnosis of HSVE, which should be considered in the differential diagnosis of recent postoperative neurosurgical cases in cases of unexplained postoperative fever with altered consciousness.

SURG-10. SPECTROSCOPIC MEASUREMENT OF 5-ALA-INDUCED INTRACELLULAR PROTOPORPHYRIN IX IN PEDIATRIC BRAIN TUMORS
Michael Schwake1, Sadahiro Kamekawa2, Eric Suerro Morina1, and Walter Stummer2; 1Department of Neurosurgery, University Hospital Münster, Münster, Germany, 2Department of Neurosurgery National Hospital Organization Hokkaido Medical Center, Sapporo, Hokkaido, Japan

OBJECTIVE: 5-ALA guided resection of glioma in adults enables better delineation between tumor and normal brain, allowing improved resection and improved patients’ outcome. Recently, several reports were published regarding 5-ALA for resection of pediatric brain tumors. The aim of the study was to determine the feasibility of the use of 5-ALA in pediatric brain tumors by hyperspectral imaging and to compare it with visually observed intraoperative fluorescence. METHODS: 5-ALA was administrated orally four hours prior to surgery. During tumor resection the fluorescence was assessed. Subsequently, fluorescence intensity of samples was measured via spectroscopy. In addition, clinical data, imaging and laboratory data were analyzed. RESULTS: Eleven children (1–16 years) were operated. Tumor entities included: three medulloblastomas, two pilocytic astrocytomas (PA), two anaplastic ependymomas and one diffuse astrocytoma, two ependymomas, pilomyxoid astrocytoma and anaplastic pleomorphic xanthoastrocytoma. Strong fluorescence was visible in all anaplastic tumors and one PA; one PA demonstrated weak fluorescence. Visible fluorescence was strongly associated with intracellular fluorescence intensity and PPIX content.