had a KPS score of 100, and an elevated D-dimer level (7.59 μg/ml), revealing pulmonary embolism and deep vein thrombosis. She was started on a DOAC and underwent surgical removal of the tumor via craniotomy. She was diagnosed with glioblastoma and underwent radiotherapy in combination with chemotherapy. Approximately 20% of the patients with glioblastomas suffer concurrent symptomatic venous thromboembolism. The incidence of venous thromboembolism is further elevated in patients with a poor KPS score or elderly people. Many patients with glioblastomas suffer asymptomatic venous thromboembolism. In this report, asymptomatic venous thromboembolism was noted in patients with a good KPS score. In glioblastoma patients, it is necessary to test for venous thromboembolism by measuring D-dimer levels before surgery.

COT-19
TREATMENT EXPERIENCE OF AND TIPS FOR ADMINISTERING NOVO-TTF
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BACKGROUND: Current standard of care for glioblastoma, consists of postoperative temozolomide (TMZ) concomitant with radiotherapy, followed by adjuvant TMZ monotherapy. Recently, an international phase 3 trial (EF-14) demonstrated that addition of tumor-treating fields (TTF) to adjuvant TMZ after completion of chemoradiotherapy extended median progression-free survival and overall survival by 2.7 months and 4.8 months, respectively, compared with TMZ alone in patients with newly diagnosed glioblastoma. TTF is now considered as a part of its initial treatment in the guideline in Japan (modified EF-14). However, TTF can cause severe side effects from an anticancer drug that has not been known or experienced using TTF as a therapeutic device so far, especially in management and handling. METHODS: First six patients with newly diagnosed glioblastoma who underwent TTF were analyzed with special interest in medical and social supports to execute TTF at home. RESULTS: TTF was first introduced in our institution in May 2016, but no patients were treated because of no coverage by medical insurance until December 2017. We further needed to wait to initiate TTF treatment until January 2019 when the contract to use TTF systems was finally made between the company and institution. Since then six patients were registered in five months. For its introduction to clinical practice, it is essential to establish a new in-house environment with medical professions division in the facility including documentations of calculating instruction fees and usage guidance for home care application of TTF. It is also important to initiate providing information of TTF such as timing of visit by specific practitioners and potential medical and psychologic burdens to patients and their families during and after chemoradiotherapy to better understand this new modality leading to the consent acquisition.

CONCLUSIONS: Introducing TTF into clinical practice should accompany improvement of management in not only medical equipment and documentations but also patient care in hospital and home.

COT-20
PERIOPERATIVE STATUS OF SERUM D-DIMER LEVEL AND VENOUS THROMBOSIS IN PATIENTS WITH MALIGNANT BRAIN TUMORS
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BACKGROUND: The patients with malignant brain tumors frequently show the hypercoagulability state and a decrease in fibrinolysis ability with an elevation in D-dimer. This is partially due to tumor-related hemiparesis showing the hypercoagulability state and a decrease in fibrinolysis ability with an elevation in D-dimer. This is partially due to tumor-related hemiparesis. In patients with glioblastomas, asymptomatic venous thromboembolism is further elevated in patients with a poor KPS score or elderly people. Many patients with glioblastomas suffer asymptomatic venous thromboembolism. In this report, asymptomatic venous thromboembolism was noted in patients with a good KPS score. In glioblastoma patients, it is necessary to test for venous thromboembolism by measuring D-dimer levels before surgery.

METHODS: We retrospectively examined the pre- and postoperative serum D-dimer levels and DVT state in 75 consecutive patients with malignant brain tumors who underwent surgery at our hospital from January 2015 to April 2019. The patients were divided into two groups according to the result of the D-dimer level: the "hypercoagulability group" with D-dimer level over 2 μg/ml and the "fibrinolysis group" with D-dimer level of 2 μg/ml or less. The postoperative complications were also assessed.

RESULTS: Of the 75 patients, 22 (29.3%) had elevated serum D-dimer levels before surgery, and 17 (22.6%) of these patients developed DVT. The incidence of venous thromboembolism was significantly higher in the hypercoagulability group than in the fibrinolysis group (40.9% vs. 11.4%, p = 0.009). However, no significant difference was observed in the incidence of postoperative complications between the two groups (27.3% vs. 23.5%, p = 0.727).

CONCLUSIONS: The elevated serum D-dimer levels before surgery were predictive of postoperative venous thromboembolism in patients with malignant brain tumors. However, the incidence of postoperative complications was not increased in patients with elevated serum D-dimer levels before surgery.

COT-21
EFFECT OF BEVACIZUMAB FOR PEDIATRIC HIGH GRADE GLIOMA
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INTRODUCTION: Bevacizumab (BEV) therapy has been used for pediatric high grade glioma, however the evidence and effectiveness are not understood yet. METHODS: We report 7 cases (age 2 to 10 years old) of pediatric high grade glioma treated with BEV. One case is thalamic diffuse midline glioma H3K27 mutant (DMGH3K27M), one case is cerebellar high grade glioma, and 4 cases are diffuse intrinsic pontine glioma (DIPG) diagnosed clinically without biopsy. 5 cases were treated with BEV when diagnosed as recurrence after chemoradiotherapy. One case was treated for rapid tumor progression during radiotherapy. One case was started on BEV therapy with radiation and concomitant temozolomide therapy, RESULT: The number of times of BEV was 2 to 13 times (median 7 times). The period of BEV was 1 to 9 months (median 4 months). One case which was treated with BEV at rapid progression during radiation showed good response on imaging and improvement of symptoms. 4 of 5 cases which were treated at recurrence clinically showed mild symptomatic improvement. One case treated with BEV and radiotherapy initially was not evaluated. The adverse effects of BEV included wound complication of tracheostomy and rash. CONCLUSION: BEV showed good response for rapid progression during radiotherapy, and mild response for recurrence cases. BEV is thought to be an effective therapeutic agent for pediatric HGG at recurrence and rapid tumor progression during radiotherapy.

COT-22
TIMING OF SURGERY AND BEVACIZUMAB THERAPY FOR MALIGNANT GLIOMA
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BACKGROUND: The drug manufacturer recommends postponing initiation of bevacizumab for malignant gliomas at least 4 weeks after postoperatively. Malignant glioma patients with significant neurologic deficits due to postoperative residual tumors are preferably needed earlier bevacizumab therapy that may improve the prognosis of neurological state and brain edema. There is a literature review indicating that the timing for administration of postoperative bevacizumab was at least 2 weeks. The authors assessed the safety, tolerability, and efficacy for bevacizumab therapy less than 4 weeks after postoperatively. METHODS: Six patients of malignant gliomas with residual tumors and neurologic deficits were treated by bevacizumab (10 mg/kg every 2 weeks) therapy 2–3 weeks after postoperatively with chemoradiotherapy. Patients included 31-year-old female with thalamic-midbrain glioblastoma (initial), 11-year-old female with anaplastic high grade glioma, however the evidence and effectiveness are not understood yet. RESULTS: All the patients did not experienced hemorrhage and impair wound healing. Every patient neurological state and perifocal edema was evaluated. The adverse effects of BEV included wound complication of tracheostomy and rash. CONCLUSION: BEV showed good response for rapid progression during radiotherapy, and mild response for recurrence cases. BEV is thought to be an effective therapeutic agent for pediatric HGG at recurrence and rapid tumor progression during radiotherapy.

COT-23
INITIAL EXPERIENCE OF TREATMENT FOR GLOILOBLASTOMA BY NOVO-TTF
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PURPOSE: In 2018, Optune (TTF) became available covered by public insurance for patients with glioblastoma, based on the effectiveness of the US