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 radiation therapy 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
Daikyu Shimada1, Keiichi Kobayashi1, Kenmichi Sait1, Yoshie Tsuchimoto1, Yoshiaki Ishigaki1, Motoo Nagane1, Kyorin University Faculty of Medicine

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 (surgical). However, it is known that cancer patients treated with concomitant radiotherapy for glioblastoma are at an increased risk of venous thromboembolism (VTE). This is partially due to tumor-related hemiparesis, and a decrease in fibrinolysis ability with an elevation in D-dimer. This is partially due to tumor-related hemiparesis, and a decrease in fibrinolysis ability with an elevation in D-dimer. Therefore, we present our experience of administering TTF to patients with glioblastoma at our institution.

METHODS: We retrospectively examined the pre- and postoperative serum D-dimer levels and DVT state in 75 consecutive patients with malignant brain tumors (i.e. glioma, malignant lymphoma; mean age 64 ± 28 years) operated on with glioblastoma between December 2017 and May 2019. We recorded the preoperative serum D-dimer levels, and DVT state. The patients were classified into two groups based on whether TTF was administered or not, and the postoperative serum D-dimer levels were compared between the two groups. The rates of DVT and deep vein thromboembolism were also evaluated.

RESULTS: All the patients did not experience any complications related to TTF treatment. All patients were discharged without any adverse events. Two patients developed transient hemiparesis after TTF treatment, which resolved within 24 hours. The postoperative serum D-dimer levels were significantly lower in the TTF group than in the control group. The rate of DVT was significantly lower in the TTF group than in the control group. The rate of deep vein thromboembolism was also significantly lower in the TTF group than in the control group.

CONCLUSIONS: Our experience suggests that TTF treatment is safe and effective in patients with malignant brain tumors, and can be considered as an additional therapeutic option for these patients.

COT-20
PERIOPERATIVE STATUS OF SERUM D-DIMER LEVEL AND VENOUS THROMBOSIS IN PATIENTS WITH MALIGNANT BRAIN TUMORS
Daikyu Shimada1, Keiichi Kobayashi1, Kenmichi Sait1, Yoshie Tsuchimoto1, Shohei Iijima1, Yoshiaki Ishigaki1, Motoo Nagane1, Kyorin University Faculty of Medicine

BACKGROUND: The patients with malignant brain tumors frequently show the hypercoagulability state and a decrease in fibrinolytic ability with an elevation in D-dimer. This is partially due to tumor-related hemiparesis, and a decrease in fibrinolysis ability with an elevation in D-dimer. Therefore, we present our experience of administering TTF to patients with glioblastoma at our institution.

METHODS: We retrospectively examined the pre- and postoperative serum D-dimer levels and DVT state in 75 consecutive patients with malignant brain tumors (i.e. glioma, malignant lymphoma; mean age 64 ± 28 years) operated on with glioblastoma between December 2017 and May 2019. We recorded the preoperative serum D-dimer levels, and DVT state. The patients were classified into two groups based on whether TTF was administered or not, and the postoperative serum D-dimer levels were compared between the two groups. The rates of DVT and deep vein thromboembolism were also evaluated.

RESULTS: All the patients did not experience any complications related to TTF treatment. All patients were discharged without any adverse events. Two patients developed transient hemiparesis after TTF treatment, which resolved within 24 hours. The postoperative serum D-dimer levels were significantly lower in the TTF group than in the control group. The rate of DVT was significantly lower in the TTF group than in the control group. The rate of deep vein thromboembolism was also significantly lower in the TTF group than in the control group.

CONCLUSIONS: Our experience suggests that TTF treatment is safe and effective in patients with malignant brain tumors, and can be considered as an additional therapeutic option for these patients.

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 (DMG/H3K27M), 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. RESULTS: The number of times of BEV was 2 to 3 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 radiotherapy showed good response on imaging and improvement of symptoms. 4 of 5 cases who 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 later postoperatively. Malignant glioma patients with significant neurological deficits due to postoperative residual tumors are preferably needed earlier bevacizumab therapy that expecting improvement of neurological state and perifocal 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, efficacy for bevacizumab therapy less than 4 weeks later postoperatively. METHODS: Six patients of malignant gliomas with residual tumors and neurological deficits were treated by bevacizumab (10mg/kg every 2 weeks) therapy 2–3 weeks later postoperatively with chemoradiotherapy. Patients included 31-year-old female with thalamic-midbrain glioblastoma (initial), 11-year-old female with anaplastic ependymoma (recurrent), 71-year-old female with initial cervical cord anaplastic astrocytoma (initial), 88-year-old female bilateral frontal glioblastoma (initial), 27-year-old female with thalamic-midbrain glioblastoma (initial), and 3-year-old female with brain stem glioblastoma (initial). RESULTS: All the patients did not experience hemorrhage and impaired wound healing. Every patient neurological state and perifocal brain edema followed bevacizumab therapy demonstrated early improvement. Earlier bevacizumab therapy did not delay and cease postoperative chemoradiotherapy. CONCLUSIONS: Initiation of bevacizumab therapy 2–3 weeks later postoperatively seems to be safe and effective for malignant glioma patients with worse neurological state due to residual tumor and perifocal edema. The optimal interval which balances the risk of complications and the risk of tumor progression should be considered.

COT-23
INITIAL EXPERIENCE OF TREATMENT FOR GliOBLASTOMA 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...