SM-01. APPLICATION OF BEVACIZUMAB TO POST-IRRADIATED CEREBRAL LESION: DIAGNOSIS, INTERVENTION AND OUTCOME
Nobuyuki Fukui, Yoshiki Arakawa, Daiki Murata, Koichi Fujimoto, and Susumu Miyamoto; Department of Neurosurgery, Kyoto University, Kyoto, Japan

BACKGROUND: Taking results of AVAglio (Chinot et al., 2014), BRAIN study (Friedman et al., 2009) and JO22506 (Nagane et al., 2012), bevacizumab (BEV) had been approved for the treatment of newly diagnosed and recurrent malignant glioma. In addition, there are some trials using BEV for symptomatic cerebral radiation necrosis (RN, Levin et al., 2011) and other brain tumor (e.g. meningioma) patients. METHODS: We retrospectively analyzed 10 cases (median age: 59.5 [range 26-69]) of cerebral lesion occurred after irradiation. By the combination of diagnostic imaging (MRI and PET) and clinical course, they were diagnosed as RN. Primary irradiated lesions were as below: 3-case of metastatic brain tumor, 2-case of meningioma and 3-case of other primary head and neck tumor. These patients were administered six cycles of 5 mg/kg bevacizumab every two weeks. RESULTS: In 7 cases, planned 6-cycles of BEV had been finished. In 3 of these 7 cases, wound complication or (extracranial) hemorrhage was clinically treated. In another 3 cases, BEV were ceased: disease progression, fetal hemorrhagic complication and deterioration of performance status respectively. After the BEV treatment, 3 cases were diagnosed as tumor recurrence by surgical resection of treated lesions. DISCUSSION: Diagnosis of RN is so difficult; we must pay attention to possibility of tumor recurrence. On the other hand, BEV could improve clinically and radiologically cerebral edema induced by RN and tumor progression. We had better consider application of BEV to post-irradiated cerebral lesion, case by case.