The polarity and property of radial glia-like neural stem cells are altered by seizures with status epilepticus

In the adult hippocampus, new neurons are produced by radial glia-like (RGL) neural stem cells in the subgranular zone (SGZ) of the dentate gyrus that extend a process toward the molecular layer, and express the glial fibrillary acidic protein, but not another astrocyte marker S100β. In rodent models of epilepsy, the adult hippocampal neurogenesis is known to be increased in acute seizures, but to be decreased in chronic epilepsy. A recent study suggests that in the chronic epilepsy model, RGL neural stem cells are converted into star-shaped astrocytes. However, it remains to be addressed how RGL neural stem cells are influenced in acute stages of seizures. In this study, we investigated adult neurogenesis and the property of RGL neural stem cells in acute stages of pilocarpine-induced epilepsy. In mice that displayed severe seizures without status epilepticus (SE), the number of immature neurons was significantly increased compared with control mice 10 days after seizures. The number of RGL cells was not changed, and the majority of RGL cells extended a process toward the molecular layer. In mice that displayed severe seizures with SE, the number of immature neurons was unchanged. However, the number of RGL cells was significantly reduced and the process of RGL cells extended toward the hilus. Furthermore, about half of these cells expressed S100β. These results indicate that in acute stages of severe seizures with SE, the polarity of RGL cells in the SGZ is inverted, and the property of RGL neural stem cells is converted into that of astrocytes.

P1-07
Characteristics of Post-Colonoscopy Colorectal Cancer: in a single center case control study with 1513 cases

Background and Aims
Post-colonoscopy colorectal cancers (PCCRCs) can be detected during surveillance colonoscopy after a negative screening test. This study aims to elucidate the association between clinical characteristics of PCCRC and quality indicators (QIs) of colonoscopy.

Methods
Patients with PCCRC who underwent total colonoscopy (TCS) between October 2008 and August 2017 at our hospital and who were histologically diagnosed with adenocarcinoma within 6 months to 5 years of the last examination were included in this study. PCCRC and normally detected cancers (NDCs) identified within the same period were compared in terms of their clinicopathological characteristics. QIs at
PCCRC detection were compared to those at the last examination.

**Results**

Patients with PCCRC had a higher rate of colon surgery history than those with NDC ($p < 0.001$), but the invasion depth was shallower ($p < 0.001$). $T1b$ groups had more number of NPG-type than those of PG-type ($p = 0.018$). The ADR of colonoscopists at the time of PCCRC detection was higher than that of colonoscopists who performed the last examination ($p = 0.034$). The WT-NC was longer for PCCRC detection than at the last examination ($p = 0.010$).

**Conclusions**

Given that PCCRC cases were post-colon surgery cases, had long WT-NC, and were detected by colonoscopists with high ADR, most cases showed lesions that were missed during the previous colonoscopy. We believe that increasing the quality of medical care and QI will reduce the number of missed lesions and lead to the prevention of PCCRC onset.

**P1–08**

**Usefulness of JNET classification with dual-focus magnification for diagnosis of colorectal tumors**

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**Background**

Narrow-band imaging (NBI) magnifying endoscopy has been reported to be useful for qualitative and quantitative diagnosis of colorectal lesions. Recently, Japan NBI Expert Team (JNET) classification was advocated which is the first universal narrow-band imaging magnifying endoscopic classification of colorectal tumors. However, magnifying endoscopy requires high experience and skill. On the other hand dual-focus NBI with electronic zoom (DF-NBI) can easily provide almost the same image of optical zoom magnifying images only by button push.

The aim of study is to clarify the usefulness of JNET classification with DF-NBI for colorectal tumors.

**Methods**

We analyzed consecutive 476 colorectal lesions, which were diagnosed by JNET classification with DF-NBI observation before endoscopic treatment or surgery between April 2017 and July 2018. The instrument used in this study was a dual focus endoscope (CF-HQ290L/I; Olympus Medical Systems). The resected lesions were pathologically diagnosed in accordance with the criteria of the World Health Organization. Using these cases, we examined the relationship between each type of the JNET classification with DF-NBI and histopathologic findings. We calculated sensitivity, specificity, positive and negative predictive value (PPV and NPV), and accuracy for each category of the classification.

The JNET classification; the colorectal NBI magnifying classification consists of 4 types that are classified based on vessel pattern and surface pattern. The characteristics of Type 1 are invisible vessel pattern and having regular dark or white spots as surface pattern. The characteristics of Type 2A are regular vessel pattern, such as regular caliber or distribution, and regular surface pattern. The characteristics of Type 2B are irregular vessel pattern, such as variable caliber, irregular distribution, and irregular or obscure surface pattern. The characteristics of Type 3 are loose vessel areas or interruption of thick vessels and amorphous surface pattern. Indicators of types; Type 1 as hyperplastic polypl (HP) or sessile serrated polypl (SSP), Type 2A as low-grade dysplasia (LGD), Type 2B as high-grade dysplasia (HGD) or superficial submucosal invasive cancer (SM-s), and Type 3 as deep submucosal invasive cancer (SM-d).

**Results**

I. Final diagnosis: 66 Type 1 (43 HPs, 15 SSPs and 8 LGD), 389 Type 2A (16 HPs, 1 SSP, 385 LGD, 4 HGD and 1 SM-d), 16 Type 2B (3 LGD, 11 HGD and 2 SM-s), and 5 Type 3 (1 SM-s and 4 SM-d).

II. Diagnostic ability: The respective sensitivities, specificities, PPV, NPV, and accuracies were as follows: Type 1, 77.3%, 98.0%, 87.9%, 95.9%, and 94.7%; Type 2A, 97.2%, 95.0%, 99.0%, 87.4%, and 96.8%; Type 2B, 72.2%, 99.3%, 81.3%, 98.9%, and 98.3%; and Type