Solitary Cerebellar Metastasis of Cecal Cancer, Visualized Using F-18 FDG PET/CT

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Intracranial metastases are common in cancer patients. However, only a few intracranial metastases arise from primary colon cancer. Previous autopsy studies have shown that the incidence of brain metastases from colon cancer is less than 4% [1–4]. The most common primary sites are the sigmoid colon and rectum [5–7]. Brain metastases with concomitant liver and/or lung metastases occur more frequently than brain metastases alone [5]. Metastases to the brain most commonly occur by a hematogenous route via the portal venous system, through the liver, heart, lungs, and, finally, the carotids. Cerebellar tumors may occur in association with adenomas/adenocarcinomas of the colon in patients with Turcot's syndrome [8]. However, in Turcot's syndrome, the histological features of the brain tumor differ from those of the colon tumor and the brain tumor is not an adenoma or adenocarcinoma. The cerebellar metastasis in our patient was metachronously detected, and F-18 FDG PET/CT did not show any other metastatic lesions. To the best of our knowledge, this is the first F-18 FDG PET/CT

Fig. 1 Brain MRI scan obtained when the patient presented with dizziness showed a 2-cm round mass that was located in the right subtentorial area and showed gadolinium enhancement. The patient had undergone a right hemicolectomy with ileostomy for cecal adenocarcinoma, 1 year prior to presentation. He underwent right hemicolectomy with ileostomy for the treatment of the cecal cancer. The serum carcinoembryonic antigen level decreased to within the normal range in 10 months after surgery (postoperative level, 3.94 ng/mL; preoperative level, 7.59 ng/mL). The patient presented with dizziness 1 year after surgery. The brain MRI scan obtained at this time showed a 2-cm round mass that was located in the right subtentorial area and showed gadolinium enhancement, i.e., findings suggestive of an intraaxial tumor

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Fig. 2 F-18 FDG PET/CT image obtained at the time of presentation showed a focal hypermetabolic mass in the right cerebellum (maximum SUV=10). No other hypermetabolic lesion was observed in the chest, abdomen, or pelvis. The patient underwent suboccipital craniectomy and tumor resection because of the cerebellar mass detected by MRI and F-18 FDG PET/CT. Pathological analysis of the excised brain mass showed that it was a metastatic adenocarcinoma of cecal cancer

imaging study showing a solitary cerebellar metastasis from cecal cancer (Figs. 1 and 2).

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