Aim: We previously reported that gastric-type adenocarcinoma (GAS), a subtype of mucinous adenocarcinoma of the cervix, is more significantly associated with histopathological predictors of poor outcomes as well as with poorer survival outcomes than is usual-type endocervical adenocarcinoma (UEA). It is therefore clinically important to distinguish GAS from UEA (ASCO 2014). However, the cause of its aggressive nature remains unknown. We therefore studied the aggressive nature of GAS in patients with disease recurrence.

Methods: Patients were enrolled at the Gynecologic Cancer Study Group of the JCOG after receiving approval from an internal review board. Among 393 women with adenocarcinoma of the cervix who were enrolled, 328 with mucinous adenocarcinoma of the cervix who met the central pathological review (CPR) and eligibility criteria were included in analysis. GAS was diagnosed in 95 (28.9%) of the 328 patients. Sites of recurrence of GAS and UEA and the response to treatment (chemotherapy, radiotherapy) given after recurrence were analyzed using statistical techniques. Treatment response was evaluated according to the Response Evaluation Criteria in Solid Tumors (RECIST).

Results: Overall, recurrence occurred in 72 of the 328 patients: 38 (40%) of 95 patients with GAS and 34 (14.6%) of 233 patients with UEA. Recurrence was clearly more common among patients with GAS (p = 0.0023). In the GAS group, the sites of recurrence were local in 15 patients, distant in 15, and local plus distant in 8. In the UEA group, the sites of recurrence were local in 19 patients, distant in 11, and local plus distant in 4, with no significant difference between the groups. After recurrence, chemotherapy was given to 19 patients with GAS, with a response rate of 36.8% (7/19), and 25 patients with UEA, with a response rate of 32.0% (8/25). The difference in response rates was not significant. Radiotherapy was given to 12 patients with GAS, with a response rate of 50.0% (6/12), and 11 patients with UEA, with a response rate of 81.8% (9/11, p < 0.0001). GAS was thus significantly more resistant to radiotherapy.

Conclusions: Sites of recurrence sites and the response to chemotherapy did not differ significantly between patients with GAS and those with UEA who had recurrence. Resistance to radiotherapy may reflect the aggressive nature of GAS.

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