Image of the Month

Collision tumor with diffuse large B cell lymphoma and gastric cancer

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Figure 1.

Figure 2.

Figure 3.

Figure 4.
A 71-year-old man started having headaches and sweating, and fainted twice. The following day, the patient was examined at our hospital’s emergency room and a blood test showed he had a gastrointestinal hemorrhage. An esophagastroduodenoscopy found a 20 mm ulcer with irregular edges in the upper part of the stomach body (Fig. 1), and a 30 mm depressed lesion accompanied by swelling in the area from the incisura angularis in the lesser curvature to the anterior wall (Fig. 2). The latter was hemorrhagic and oozing from the mucosa was also observed. A biopsy showed that the former was a poorly differentiated adenocarcinoma [Group 5, adenocarcinoma, gastric mucosa (por)] invading the submucosa, and the latter a poorly differentiated cancer [Group 5, adenocarcinoma, gastric mucosa (por > sig)] that accompanied the mixture in signet-ring cell carcinoma. A computed tomography scan revealed a 20 mm swelling of the lymph nodes in the stomach and the patient was diagnosed with stage 3A progressive stomach cancer. He requested surgery and received a total gastrectomy and cholecystectomy, returning home next month.

Pathological examination of the surgical specimens showed that the tumor on the posterior wall of the upper stomach body was diffuse large B cell lymphoma (DLBCL) [Diffuse large B cell lymphoma, not otherwise specified], whereas the tumor in the anterior wall of the lower stomach body was diagnosed as gastric cancer [Adenocarcinoma, por2 > tub2 + tub1, T4aN1M0]. In addition, through the surgical specimens, a tissue image was observed of the DLBCL and stomach cancer colliding in one part (Fig. 3). In this case, the chronic infection with *Helicobacter pylori* seemed to lead to the development of two synchronous, colliding tumors. *H. pylori* is well known for inducing mucosa associated lymphoid tissue (MALT) lymphoma, the most common lymphoma element in collision tumors, and *H. pylori* infection rates are higher in the DLBCL/MALT than the de novo DLBCL. However, the case showed a transformation to large cell lymphoma without detectable MALT lymphoma components. A microscopic image indicated that the DLBCL predominantly collide with adenocarcinoma, although the underlying pathophysiological mechanism on the tumors remains to be determined (Fig. 4). In our case, the several choices of biopsy points via gastrointestinal endoscope and repeated biopsies would be necessary for an accurate preoperative diagnosis. He went to another cancer hospital for six courses of R-CHOP regimen for DLBCL and achieved a complete response. One and a half years after the operation, he is attending our hospital without recurrence.

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