Severe ischemic colitis after treatment of bile-duct cancer using gemcitabine and cisplatin

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Figure 1.

A 71-year-old male who had a bile-duct cancer with liver metastases underwent systemic chemotherapy with cisplatin (25 mg/m²) followed by gemcitabine (GC) (1000 mg/m²). Two days after the first administration, he complained of ‘crampy’ abdominal pain. White blood cell count and levels of C-reactive protein and liver enzymes were elevated but those of creatine phosphokinase and lactate...
dehydrogenase remained within normal ranges. Computed tomography images showed an extremely dilated bowel but the origin of obstruction could not be ascertained. The colonic wall was enhanced by contrast, but it was less enhanced on the left side than on the right. Superior and inferior mesenteric arteries and their branches were well perfused (Fig. 1a). Thus, we considered the cause to be twisting of the colon, fecal impaction or ischemic colitis and colonoscopy was undertaken. Colonoscopy revealed a pitch-black, mucous membrane-like cyanotic appearance and intestinal necrosis was diagnosed (Fig. 1b). The patient was deteriorating rapidly, and emergency total colectomy and ileocecal resection with ileostomy was undertaken 9 h after the onset of acute abdominal pain (Fig. 1c). Histology revealed acute inflammation/patchy ischemia of the bowel of varying severity without arterial or venous thrombosis (Fig. 1d) in the entire colon that extended to the small intestine 10 cm from the terminal ileum. Despite intensive treatment, he died due to renal failure 3 months after surgery.

Chemotherapeutic agents have been implicated in three types of necrotizing colitis: pseudomembranous colitis, neutropenic enterocolitis and ischemic colitis. Our patient did not have coagulation disorders and did not receive antibiotics, and had negative cultures for Clostridium difficile toxin. He had hypertension and had been taking amlodipine for a long time. Additional medicines were not administered in the last month except for aprepitant, palonosetron and dexamethasone given with GC for anti-emesis. Neutropenia was not seen on Day 2 of chemotherapy. As he had mild dehydration after GC due to administration of diuretics and it might have a negative influence upon intestinal perfusion, we considered that severe ischemic colitis was probably induced by GC. This is the first report focusing on severe ischemic colitis after GC. Clinicians should be aware of this potentially catastrophic adverse effect.