

Small-intestinal hemorrhage caused by treatment with sorafenib for hepatocellular carcinoma and diagnosed by capsule endoscopy

Sorafenib, a multikinase inhibitor, is the first-line treatment for unresectable progressive hepatocellular carcinoma (HCC) and has been approved by both the United States Food and Drug Administration (FDA) and the European Medicines Agency (EMA) [1,2]. Although there are studies reporting its effectiveness, there are also reports about adverse events related to treatment with this drug. Among the noted side effects is gastrointestinal hemorrhage, although only a few studies have reported the frequency of this complication [3,4]. This is the first case report of small-intestinal hemorrhage following sorafenib treatment, and includes a description of the finding of hemorrhagic lesions as determined by capsule endoscopy. An 80-year-old woman with hepatitis C liver cirrhosis and being treated at a local hospital underwent ultrasound, which showed a mass lesion in the S8 region (40 mm in diameter). She was referred to our hospital for further investigation and treatment of the mass lesion. Based on the findings of dynamic computed tomography (CT) and ethoxybenzyl magnetic resonance imaging (EOB-MRI), the patient was diagnosed as having HCC. We recommended surgical treatment and transcatheter arterial chemoembolization (TACE) but the patient declined this treatment option. Therefore, sorafenib 400 mg/day was started on day 20 in the hospital. On day 28, tarry stools were observed, and serum chemistry investigations revealed red blood count $369 \times 10^4/\mu\text{L}$, hemoglobin 11.8 g/dL, and hematocrit 34.1%, which suggested normocytic hypochromic anemia. On day 30, esophagogastroduodenoscopy revealed no hemorrhagic esophageal varices with LiF1CbRC(-) (Fig. 1). On day 35, colonoscopy revealed dark blood throughout the colon but no evident hemorrhagic lesions (Fig. 2). On day 36, the small intestine was examined with a capsule endoscope. Oozing of blood from several hemorrhagic lesions was observed. This was diagnosed as small-



Fig. 1 Esophagogastroduodenoscopy in an 80-year-old woman with hepatocellular carcinoma and tarry stools showing no hemorrhagic varices (LiF1CbRC(-)) in the esophagus.



Fig. 2 Colonoscopy showed no active hemorrhagic lesions.

intestinal hemorrhage (Fig. 3) as a side effect of sorafenib therapy. The symptoms quickly improved on cessation of the treatment. Capsule endoscopy on day 90 showed scarlike lesions in the distal small intestine, indicating significant improvement (Fig. 4).

To our knowledge, this is the first report of hemorrhage in the small intestine caused by sorafenib treatment and diagnosed by capsule endoscopy.

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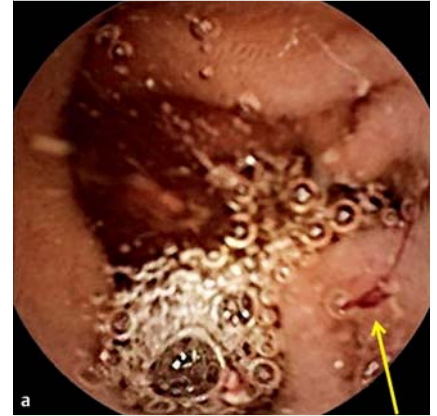


Fig. 3 First report of hemorrhagic lesions in the small intestine detected by capsule endoscopy (arrows). a Proximal small intestine. b Distal small intestine.



Fig. 4 Second capsule endoscopy of the small intestine showing improvement (arrows).

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Bibliography

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