

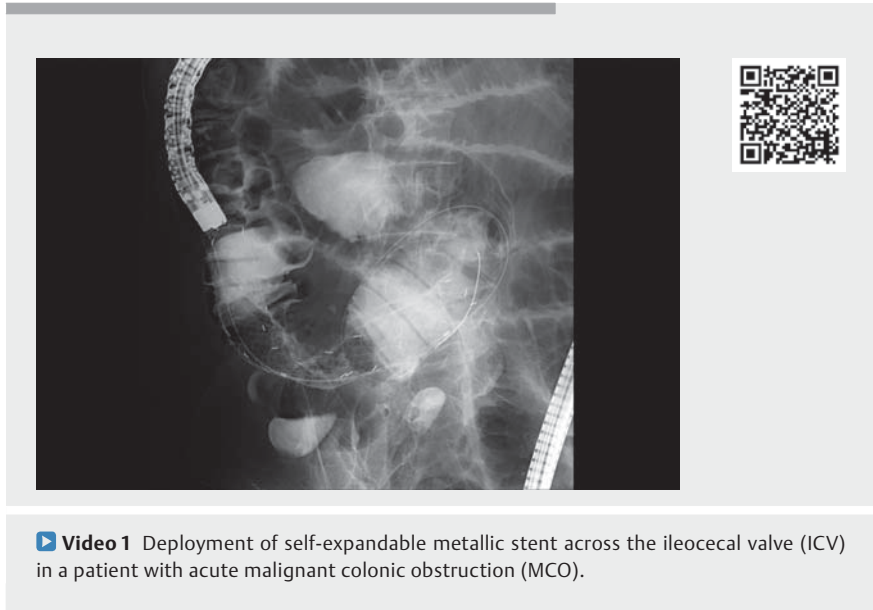
## Self-expandable metallic stent deployment across the ileocecal valve in a patient with an acute colonic obstruction



Although self-expandable metallic stent (SEMS) deployment is a treatment option for proximal malignant colonic obstructions, it remains a challenging procedure [1–3]. When the malignant colonic obstruction is close to the ileocecal valve, it is impossible to maintain a 2.0 cm safety margin on the oral end of the SEMS [1–3]. This article describes the deployment of SEMS across the ileocecal valve in a patient with acute malignant colonic obstruction.

A 71-year-old man with abdominal distension and pain was referred to our department. Abdominal computed tomography revealed dilatation of the small intestine caused by a tumor close to the ileocecal valve. Urgent SEMS deployment was carried out to decompress the small intestine (► **Video 1**), but maintaining the 2.0 cm safety margin at the oral end of the SEMS was impossible (► **Fig. 1**). We then attempted to advance the guidewire across the ileocecal valve. In such cases, the guidewire trajectory must be bent at 90° to pass through the ileocecal valve. Therefore, we first advanced a bendable catheter (SwingTip; Olympus, Tokyo, Japan) [4] with a long flexible-tip guidewire (0.025-inch, VisiGlide 2; Olympus, Tokyo, Japan). However, the guidewire became coiled in the cecum [5]. We then used an ultra-hydrophilic coated guidewire (0.032-inch, Radifocus Guide Wire M; Terumo, Tokyo, Japan), which was able to pass through the ileocecal valve (► **Fig. 1 a**). Finally, we deployed two SEMSs (each 12 cm, Niti-S Enteral Colonic Uncovered Stent; Taewoong Medical, Gimpo-si, South Korea) across the ileocecal valve under the guidewire without any complication (► **Fig. 1 b, c**, ► **Fig. 2**). The patient underwent primary laparoscopic surgery 2 weeks after the intestinal decompression.

A bendable catheter with an ultrahydrophilic coated guidewire facilitates the deployment of SEMS across the ileocecal



**Video 1** Deployment of self-expandable metallic stent across the ileocecal valve (ICV) in a patient with acute malignant colonic obstruction (MCO).


valve in patients when the malignant colonic obstruction is close to the valve. This procedure enables primary laparoscopic surgery and prevents the need for transnasal long intestinal tube insertion and secondary surgery after decompression of the stoma.

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### Competing interests

The authors declare that they have no conflict of interest.

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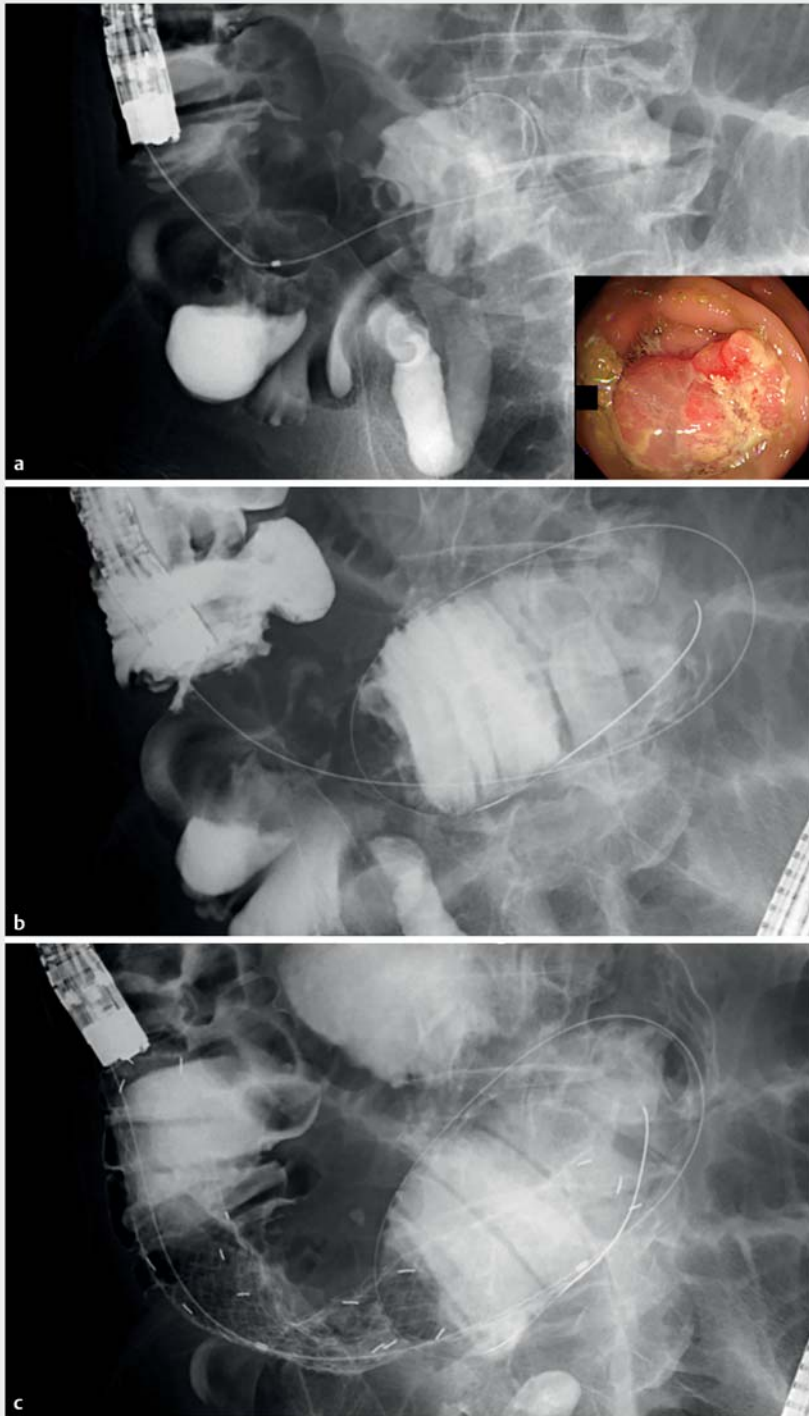
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► **Fig. 1** Self-expandable metallic stent (SEMS) deployment across the ileocecal valve. **a** Guidewire negotiation using a bendable catheter plus ultrahydrophilic coated guidewire. The guidewire successfully passes the ileocecal valve and advances into the small intestine. **b** Malignant colonic obstruction is close to the ileocecal valve and also appears to invade the area around the ileocecal valve. As a result, the small intestine is distended. **c** Colonic uncovered stents are successfully deployed across the ileocecal valve.



► **Fig. 2** Abdominal computed tomography (CT) following the day of the procedure. A CT scan reveals self-expandable metallic stents deployed across the malignant colonic obstruction and ileocecal valve. The edematous ileum/cecum and fluid collection indicates ischemic changes due to acute malignant colonic obstruction.

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