

A Novel Device, the Anglerfish Countertractor, is Easy and Safe to Use in Patients Undergoing Endoscopic Submucosal Dissection of Gastric Mucosal Cancer

Nobuyuki Sakurazawa, Shunji Kato, Masao Miyashita, Teruo Kiyama,
Itsuro Fujita, Hitoshi Kanno, Takashi Tajiri and Eiji Uchida

Surgery for Organ Function and Biological Regulation, Graduate School of Medicine, Nippon Medical School

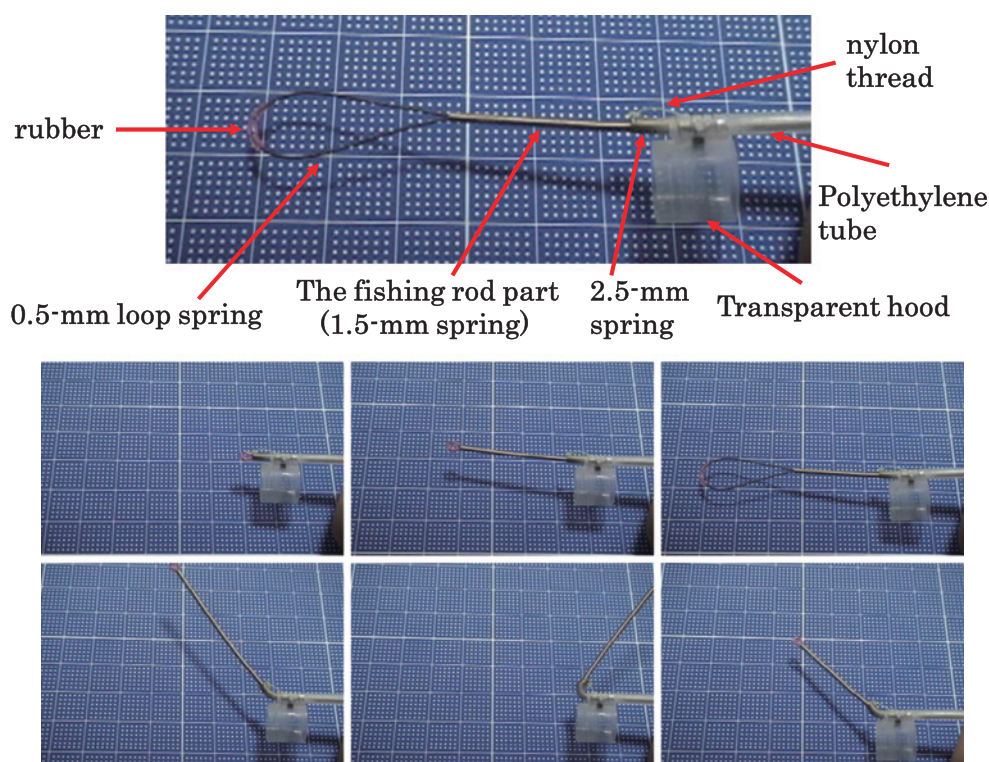


Fig. 1

Endoscopic submucosal dissection (ESD) is a treatment developed to overcome the technical limitations of endoscopic mucosal resection (EMR). ESD permits en bloc resection of larger lesions and achieves a higher rate of histologically complete resection than does conventional EMR. However, ESD is technically more complex and time-consuming than convention EMR. There are occasional complications, most often bleeding and perforation. Because a main reason for these complications is inadequate countertraction during submucosal dissection, an endoscope equipped with the anglerfish countertractor will be introduced in this photogravure. This device was developed by Nobuyuki Sakurazawa of the Department of Surgery, Nippon Medical School. It allows sufficient countertraction and direct visualization of the cutting line, and en bloc resection can be performed without complications.

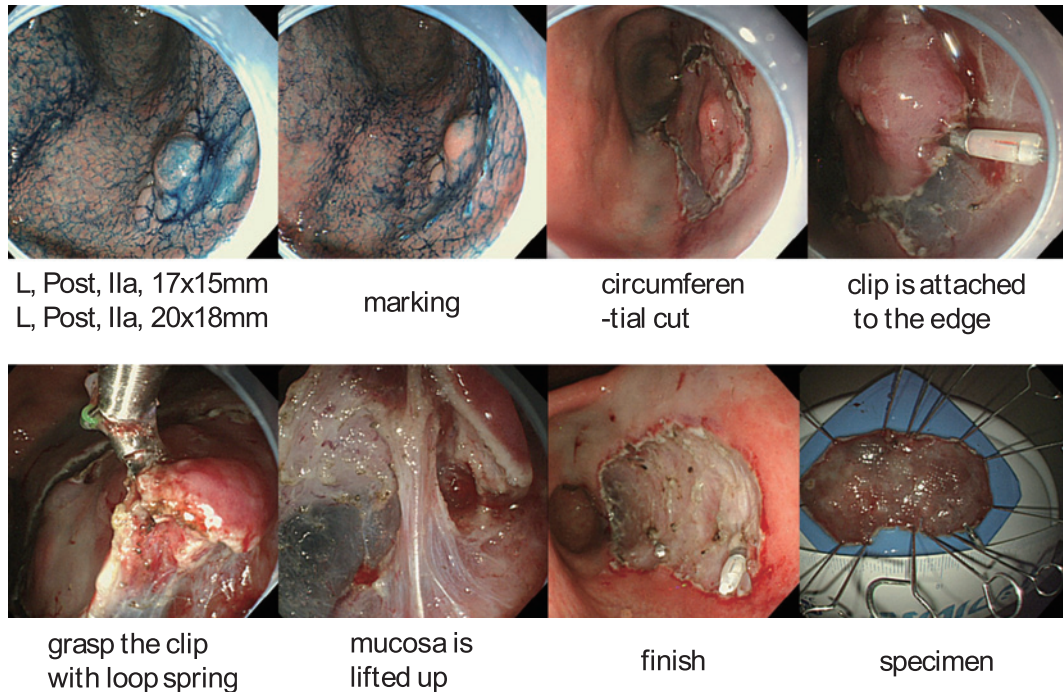


Fig. 2

Fig. 1 The anglerfish countertractor

This device consists of 3 springs of different diameters and is attached with a transparent hood to the tip of an endoscope. It can move like a fishing rod. 1: The fishing rod part (which resembles the bioluminescent spine of an anglerfish) is made with the 1.5-mm spring. 2: The 1.5-mm spring has a built-in 0.5-mm loop spring that holds a clip with the loop spring. 3: The 1.5-mm spring is moved up and down with a nylon thread attached to the 2.5-mm spring. The nylon thread is pulled through a polyethylene tube. 4: When the 0.5-mm spring is strongly pulled, the tension increases to make the 1.5-mm spring rigid (yielding the adjustable rigidity system for the fishing rod).

Fig. 2 Procedure of ESD using the anglerfish countertractor

The patient was a 71-year-old woman with double cancer of the antrum (IIa, tub1, 17 × 15 mm/ lower body) and the posterior wall (IIa, pap, 20 × 18 mm). (WHAT ARE “tub1” AND “pap”? THESE SHOULD BE SPELLED OUT.) The two lesions were resected en bloc, and the resected specimen measured 56 × 29 mm. The time for circumferential cutting of the mucosa was 26 minutes, and the time for submucosal dissection was 56 minutes. The hospital stay after ESD was 7 days.