

The EndoRotor, a novel tool for the endoscopic management of pancreatic necrosis

Acute pancreatitis may run a severe course when pancreatic necrosis becomes infected, with mortality rates of up to 30% [1–3]. Endoscopic drainage and ensuing necrosectomy have been shown to be effective in the management of pancreatic necrosis [4,5]. One of the main limitations of endoscopic necrosectomy is the lack of dedicated and effective instruments to remove the necrotic tissue.

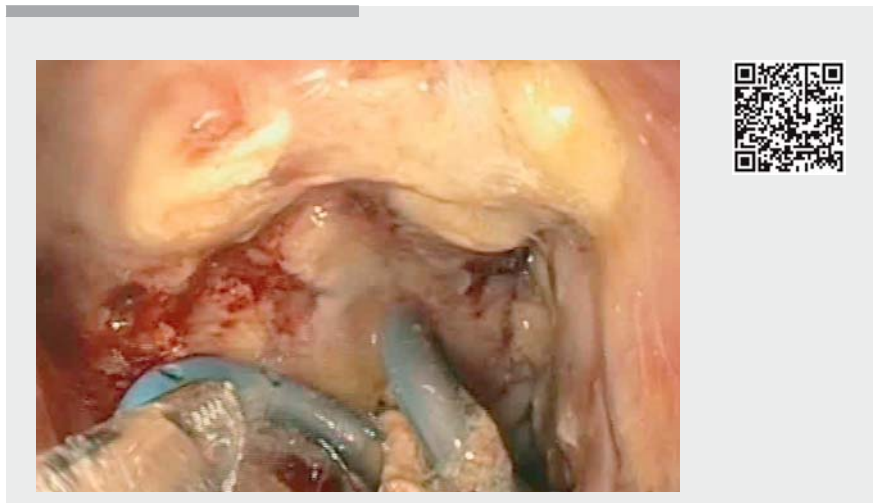
The EndoRotor (Interscope Medical, Inc., Worcester, Massachusetts, USA) is a novel automated mechanical endoscopic resection system designed for use in the gastrointestinal tract for tissue dissection and resection with a single device; it can be used to suck, cut, and remove small pieces of tissue. The EndoRotor catheter has a fixed outer cannula with a hollow inner cannula (► **Fig. 1**). A motorized, rotating cutting tool, driven by an electroni-

cally controlled console, performs tissue resection and rotates at either 1000 or 1700 revolutions per minute. The resected tissue is immediately aspirated away from the resection site, cut by the rotating inner cannula, and collected in the tissue collection trap. Both the cutting tool and the suction are controlled by the endoscopist using two separate foot pedals. We here present the first two patients with infected walled-off pancreatic necrosis who were endoscopically treated using the EndoRotor. Imaging of the pan-

creas revealed a mean necrotic collection size of 135mm in diameter (► **Fig. 2**). Both patients had previously been treated unsuccessfully with conventional tools in two and four procedures, respectively. Complete removal of the pancreatic necrosis was achieved with two additional procedures in each patient using the EndoRotor (► **Video 1**). No procedure-related adverse events occurred. Both endoscopists were very satisfied about the ease of use and effective removal of necrotic tissue.



► **Fig. 1** The EndoRotor catheter.



► **Video 1** Video showing endoscopic necrosectomy of walled-off pancreatic necrosis using the EndoRotor, a novel automated mechanical endoscopic resection system.



► **Fig. 2** Pre-intervention computed tomography scans of the abdomen in: **a, b** patient #1; **c** patient #2.

Initial experience with the EndoRotor in two patients suggests that this device can safely, quickly, and effectively remove pancreatic necrosis.

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Competing interests

Marco J. Bruno received consultant and lecturer fees for: Boston Scientific group, Cook Medical and 3M. He also received industry and investigator initiated grants for: Boston Scientific group, Cook Medical and 3M. J.W. Poley received: consultancy, travel and speaker's fees for: Boston Scientific group, Cook Medical and Pentax.

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References

- [1] Working Group IAP/APA Acute Pancreatitis Guidelines. IAP/APA evidence-based guidelines for the management of acute pancreatitis. *Pancreatology* 2013; 13: e1 – e15
- [2] van Santvoort HC, Bakker OJ, Bollen TL et al. A conservative and minimally invasive approach to necrotizing pancreatitis improves outcome. *Gastroenterology* 2011; 141: 1254 – 1263
- [3] van Santvoort HC, Besselink MG, Bakker OJ et al. A step-up approach or open necrosectomy for necrotizing pancreatitis. *NEJM* 2010; 362: 1491 – 1502
- [4] Bugiantella W, Rondelli F, Boni M et al. Necrotizing pancreatitis: A review of the interventions. *Int J Surg* 2016; 28 (Suppl. 01): S163 – S171
- [5] Gurusamy KS, Belgaumkar AP, Haswell A et al. Interventions for necrotising pancreatitis. *Cochrane Database Syst Rev* 2016; 4: CD011383

Bibliography

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