

## Gastrointestinal endoscopic innovation from China

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**Endoscopic Retrograde Appendicitis Therapy (ERAT):** Inspired by the success of emergency endoscopic retrograde cholangiopancreatography (ERCP) in treating acute cholangitis, we developed a minimally invasive method named ERAT to diagnose and treat acute appendicitis. We first reported this technique in DDW 2011. At present, there are more than 20 medical centers in China to carry out the ERAT technique. ERAT provide a new procedure for the treatment of acute appendicitis with rapid pain relief and short recovery time.

**Liu Peroral Endoscopic Myotomy (Liu-POEM):** Peroral endoscopic myotomy (POEM) has emerged as one approach to treat esophageal achalasia. Tunnellization and the myotomy are the key procedures. Submucosal tunneling requires one-third to one-half of the total operation time. For improvement of POEM procedure, we performed myotomy and tunneling as one step and then closed the entry site as before. We performed the modified procedure more than 60 cases.

**Endoscopic Fenestration:** The treatment of pancreatic pseudocyst is challenging and difficult. Although endoscopic therapy of pancreatic pseudocyst is considering first line therapy, there are some cases requiring surgical intervention or repeated endoscopic drainage procedures. We described endoscopic fenestration for treatment of large pancreatic pseudocyst in 3 cases. Endoscopic fenestration could be obtaining sufficient drainage which avoids pancreatic pseudocyst recurrence. The pseudocyst cavity was gradually reduced and healed after endoscopic fenestration.

**Transrectal Gallbladder-Preserving Cholecystolithotomy (TRGPC):** Transcolonic NOTES was not used in human cases due to the fecal contamination. We have developed a detachable balloon to keep the distal colonic cavity sterile and performed cholecystolithotomy and polypectomy with gallbladder preserved in 36 patients by the end of May 2016. Transrectal NOTES gallbladder-preserving operation provides a novel alternative approach of treating gallbladder polyps and stones.

**Endoscopic Submucosal Dissection for Losing Weight:** The gastric endoscopic submucosal dissection (ESD) as a new bariatric technique can affect weight gain. Previous animal experimental study suggested that ESD of one thirds of the stomach fundus can effectively and durably decrease the volume of stomach, thus significantly affect weight gain.

## Biography

Bing-Rong Liu has completed his MD in 2002 from Chongqing Medical University. He was appointed as the Director of Gastrointestinal Department of the Second Affiliated Hospital of Harbin Medical University in June 2004. He has developed so many endoscopic new techniques and published more than 20 papers in reputed journals.

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