

# World Journal of *Gastrointestinal Endoscopy*

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**ABOUT COVER**

Editor-in-Chief of *World Journal of Gastrointestinal Endoscopy*, Dr. Sang Chul Lee is a Professor in the Department of General Surgery of the College of Medicine, Catholic University of Korea and a Colorectal Surgeon at Daejeon St. Mary's Hospital, which is famous for minimally invasive surgery in Korea. His clinical practice specialization in laparoscopic surgery involves a focus in the field of single-port laparoscopic techniques. His standard and routine operation modality is single-port laparoscopic SOLO surgery, with application in a vast spectrum of disease entities and conducted by use of a camera-holder instead of a human assistant. His ongoing research interests are minimally invasive surgery and endoscopic procedures, and for the last several years, he has been performing completely scar-less surgeries. He serves as editorial board member and reviewer for several scientific journals and has published more than 120 peer-reviewed articles. (L-Editor: Filipodia)

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WJGE mainly publishes articles reporting research results and findings obtained in the field of gastrointestinal endoscopy and covering a wide range of topics including capsule endoscopy, colonoscopy, double-balloon enteroscopy, duodenoscopy, endoscopic retrograde cholangiopancreatography, endosonography, esophagoscopy, gastrointestinal endoscopy, gastroscopy, laparoscopy, natural orifice endoscopic surgery, proctoscopy, and sigmoidoscopy.

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## Do available data support the widespread adoption of pancreatoscopy guided-lithotripsy?

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### Abstract

Peroral pancreatoscopy (POPS) is a demanding endoscopic procedure that can be used to perform intracanal lithotripsy in obstructing pancreatic stones but the experience is limited. Most stones can be removed successfully by endoscopic retrograde cholangio-pancreatography but patients with large stones require advanced therapeutic approaches, such as extracorporeal shock wave lithotripsy (alone or followed by endoscopic retrograde cholangio-pancreatography), currently the mainstay of treatment. Unfortunately, in about 10% of cases, extracorporeal shock wave lithotripsy can fail; moreover, it is not available in many institutions. For this subgroup of patients, POPS guided-lithotripsy can play a role and have benefits. The most consistent study concerns a retrospective multicenter analysis that enrolled few patients per center. Considering the epidemiological scenario and the scant volume of skilled endoscopists, POPS must be developed in very few high-volume referral centers with standardized pathways and capable of performing multi-modality treatment. In addition, we could reasonably assume that POPS-guided-lithotripsy should be used as rescue therapy in special situations, identifying the ideal candidate who can achieve the maximum clinical result, and carefully balancing risk/benefits ratio.

**Key Words:** Pancreatic stones; Pancreatoscopy guided-lithotripsy; Rescue therapy; Extracorporeal shock wave lithotripsy; Endoscopic retrograde cholangio-pancreatography; Referral centers

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**Core Tip:** In chronic pancreatitis, the goal of treatment is reducing pain by eliminating obstructing pancreatic stones. There are several minimally invasive treatment approaches, such as extracorporeal shock wave lithotripsy and/or endoscopic retrograde cholangio-pancreatography; but where they fail, more advanced therapeutic techniques can be used.

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Peroral pancreatoscopy guided-lithotripsy is an appropriate option but should be performed as rescue therapy by experienced endoscopists in very few high-volume referral centers.

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## TO THE EDITOR

Peroral pancreatoscopy (POPS) is an endoscopic, challenging procedure to directly visualize the main pancreatic duct, permitting tissue acquisition, and can be also used for therapeutic purposes, such as intracanalicular lithotripsy<sup>[1]</sup>. Although in the last decade technology has been continuing to improve with the recent development of single-operator digital cholangio-pancreatoscopy, pancreatic experience is limited.

In chronic pancreatitis, the goal of treatment is reducing pain by eliminating obstructing pancreatic stones. While the use of cholangioscopy for difficult biliary stones' management is well documented, most pancreatic stones (< 5 mm) can be removed successfully by endoscopic retrograde cholangio-pancreatography (commonly known as ERCP). Patients with large stones require advanced therapeutic approaches, such as extracorporeal shock wave lithotripsy (ESWL) (alone or followed by ERCP), currently the mainstay of treatment. Unfortunately, in about 10% of cases, ESWL can fail or not be suitable; moreover, it is not available in many institutions. In this subgroup of patients, POPS guided-lithotripsy (POPS-gl) can play a role and have benefits.

"Extrema ratio" surgery offers the best long-term results for chronic pancreatitis, being associated with a lower rate of relapse<sup>[2]</sup>; although, the biggest criticism of any study is that neither ESWL nor POPS-gl was included in the endoscopic arm. We must keep in mind that not all endoscopists performing cholangioscopy routinely have dexterity in direct intraluminal lithotripsy for difficult biliary stones' treatment. This further restricts the field of endoscopist experts. Nowadays, if you look at the available literature, you realize the low volume of patients treated and that data must be interpreted with caution.

The most consistent study concerns a retrospective analysis involving 17 centers in the United States and Europe, where just over 100 cases (about 6 patients per center!) treated with POPS-gl were enrolled during 3 years<sup>[3]</sup>. In others published reports, describing a systematic review<sup>[4]</sup> and a retrospective multicenter cohort<sup>[5]</sup>, the authors collected a total of 87 and 28 patients, respectively. From all these data, the scant volume of skilled endoscopists and the epidemiological scenario, we believe POPS must be developed in very few high-volume referral centers with standardized pathways and capable of performing multi-modality treatment.

In addition, we could reasonably assume that POPS-gl should be used as rescue therapy in special situations and will be associated fewer interventions, more wide de-obstructions and lower risk of infection. Thus, it seems wise to implement a new level of evidence in order to identify the ideal candidate who can achieve the maximum clinical result, while carefully balancing risk/benefits ratio.

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