

# Outcomes of Endoscopic Retrograde Cholangiopancreatography in Patients With Situs Inversus Viscerum

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## Introduction

- Situs inversus (SIV) is a rare congenital condition defined by the left to right transposition of all viscera as a mirror image.
- This uncommon variant has been reported to cause technical challenges in endoscopic retrograde cholangiopancreatography (ERCP).
- We aimed to evaluate clinical and technical success rates and procedural characteristics of patients with SIV undergoing endoscopic retrograde cholangiopancreatography.

## Methods

- Retrospective review of data from consecutive patients with SIV undergoing ERCP.
- Data was collected from querying a nationwide Veterans Affairs Health System database for patients with a diagnosis of situs inversus (ICD Q89.3) who completed ERCP between January 1, 2010 to March 31, 2022.
- Demographic and procedure characteristics were collected.

Gender	Age	Indication	Technical Success	Clinical Success	Reason for failure	Rendezvous ERCP attempted	Rendezvous ERCP technically successful	Rendezvous ERCP clinically successful
Male	72	Choledocholithiasis	Yes	Yes				
Male	74	Pancreatic adenocarcinoma	Yes	Yes				
Male	88	Choledocholithiasis with cholangitis	No	No	Unable to cannulate the ampulla	Yes	Yes	Yes
Male	62	Periampullary Adenocarcinoma	Yes	Yes				
Male	59	Choledocholithiasis	No	No	Unable to cannulate the ampulla	No		
Male	88	Choledocholithiasis	Yes	Yes				
Female	63	Benign biliary stricture	Yes	Yes				
Male	63	Choledocholithiasis with cholangitis	No	No	Unable to visualize the ampulla	Yes	Yes	Yes

Table 1. Patient and Procedural Characteristics

## Results

- A total of 654 patients with SIV were identified. 8 patients had undergone ERCP.
- The median age was 68 and the most common indication for ERCP was choledocholithiasis
- Clinical success (successful management of choledocholithiasis, cholangitis, stricture, or obtaining specimens) was achieved in 63%. When considering subsequent rendezvous ERCP if conventional ERCP failed, clinical success was achieved in 88% of cases. Technical success was 88%

## Conclusions

- In our limited series, the clinical and technical success rate of ERCP for patients with SIV is higher than previously reported.
- In patients with SIV where conventional ERCP biliary cannulation fails, IR assisted rendezvous can be considered.