



Research Article

ROLE OF ENDOTHERAPY IN MANAGEMENT OF CHRONIC PANCREATITIS AND ITS COMPLICATIONS-A TERTIARY CARE EXPERIENCE

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ABSTRACT

Introduction: In the setting of chronic pancreatitis, pancreatic ductal obstruction, ductal leak, pseudocyst formation and biliary obstruction present many challenges for endoscopists and management of these complications is complex. Here we present an observational study of endotherapy in patients with chronic pancreatitis with its complications.

Methodology: The study was conducted from January 2015 to June 2017 at Madras Medical College. Patients diagnosed as CP with complications based on Clinical, Biochemical and imaging features were included in the study.

Results: Total of 447 patients admitted with Chronic pancreatitis with pain and other complications at our Centre. Among 447 cases 134 cases posted for Endotherapy (male 96,71.6% and female 38,28.4%). Following were indications of therapy symptomatic pseudocyst communicating with MPD 58 cases(43.2%), Pancreatic ascites with pancreatic pleurofistula 32(23.8%), Stricture with stones 18(13.4%) and CBD stricture 10(11.9%). Patients were treated with PD stent placement across the leak in pancreatic ascites/effusion and strictures dilated with retrieval of stones with stent placement in appropriate patients. CBD Stricture treated with DP stent placement. In 24(17.9%) patients could not able to cannulate PD due to various reasons and procedure aborted. 10(7.46%) Patients developed procedure related complications in which 8 had mild interstitial pancreatitis and 2 had mild bleeding managed conservatively.

Conclusion: Endotherapy is effective, less invasive than surgery, offers good results and is associated with low morbidity and mortality. It can be repeated and does not interfere with any subsequent surgical procedure. It is therefore advisable to offer endotherapy as the first line treatment in properly selected patients with CP.

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INTRODUCTION

Chronic pancreatitis (CP) is a progressive and often irreversible inflammatory and fibrotic disease of the pancreas. It results in both exocrine and endocrine dysfunction of pancreas. Alcohol, smoking, genetic factors and metabolic disorders are common etiological causes [1]. In our country the non alcoholic type of CP is more prevalent [2,3]. Irrespective of the etiology, the majority of patients with CP present with pain as the dominant symptom. Pain mechanisms in CP are multipronged, and recent experimental evidence suggests that pancreatic ductal hypertension can activate pancreatic stellate cells, which in turn can generate oxidative stress and subsequent inflammation [4,5]. The evidence that pancreatic ductal hypertension can result in inflammation and pain justifies ductal decompression for amelioration of pain. Decompression can be performed using endoscopic and

surgical approaches, with endoscopic approach currently recommended as the first-line modality by the European Society of Gastrointestinal Endoscopy (ESGE) [6]. As the disease is irreversible, almost all therapeutic efforts are directed towards control of pain and management of complications associated with CP. For the therapeutic endoscopist, CP is a challenge as patients can present with ductal strictures, calculi, ductal disruption, pseudocysts, biliary strictures, duodenal narrowing or a pancreatic malignancy. Endotherapy is performed in patients with CP who are unlikely to respond or have failed medical therapy as well as to manage the above mentioned complications. Surgery has often been considered the best therapeutic option for patients with CP [4]. However with advances in technology and techniques, endotherapy is offered as first line management in many patients with CP. Endotherapy offers many distinct advantages over surgery. It has a high success rate and low morbidity in properly selected patients. The procedure can be repeated with no extra risk, unlike the morbidity and difficulty associated with repeat surgery. The results are comparable to surgery and

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failed endotherapy does not hinder subsequent surgery [7-10]. The endoscopic approach can also predict the response to surgical therapy [11].

Aim

To study the effectiveness of endotherapy in chronic pancreatitis and its complications at our centre.

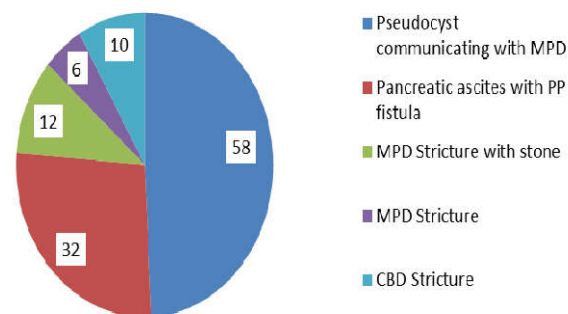
METHODS

The study was conducted from January 2015 to June 2017 at Madras Medical College. Patients diagnosed as CP with complications based on Clinical, Biochemical and imaging features were included in the study. Total of 447 patients admitted with Chronic pancreatitis with pain and other complications at our Centre. Among 447 cases 134 cases posted for Endotherapy (male 96,(71.6) and female 38,(28.4%). Following were indications of therapy symptomatic pseudocyst communicating with MPD 58 cases(43.2%), Pancreatic ascites with pancreatic pleurofistula 32(23.8%), Stricture with stones 18(13.4%) and CBD stricture 10(7.46%).

RESULTS

Total 134 patients underwent endotherapy for chronic pancreatitis with pain and for other complications. Predominant indication for endotherapy was for abdominal pain secondary to large pseudocyst not responded to conservative therapy. 52() Patients had large pseudocyst communicating with MPD. All these patients underwent ERCP with 5 fr*7 cm PD stenting with or without sphincterotomy depending on the cases. Most of these patients responded to treatment with followup USG imaging revealed decrease in size of pseudocyst and decrease in intensity of pain. Next most common indication was Pancreatic ascites with pancreatic pleurofistula 32(23.8%). MRI abdomen with MRCP revealed ductal disruption at head or body of pancreas and in some patients there was communicating with right pleural cavity. All these patients underwent ERCP with PD stenting across the duct disruption. There was dramatic response to PD stenting where there was decrease in ascites and pleural fluid drainage. 10 Patients had CBD stricture secondary to chronic pancreatitis and all these patients underwent DP stenting of the CBD with exchange every 3 months for up to 1 year and LFT normalized in all these patients. 12 patients had MPD stricture with stones and 8 had only MPD Stricture. Only 6 patients had successful endotherapy with PD Cannulation and rest of the patients procedure abandoned and referred to Surgery. Patients with MPD radiopaque stones with > 5mm were excluded from endotherapy as ESWL treatment was not available at our centre.

Chronic pancreatitis & its complications



DISCUSSION

In chronic pancreatitis pain is the decisive symptom, causing discomfort in their daily lives and is the symptom that most commonly induces patients to seek medical attention and treatment. The etiology of pain in patients with CP is probably multifactorial, although increased pressure in the MPD is considered an vital cause, particularly in patients with dilated MPD. Pancreatic ductal calculi are a consequence of CP and tend to aggravate or produce pain by obstructing pancreatic ducts and producing upstream hypertension. They can occur in 50% of patients with CP. Stones seen in the tropics and of the non-alcoholic type of CP tend to be larger and denser than those seen in the alcoholic variety. Endotherapy is particularly useful for single strictures in the head and body and not amenable in patients who are having multiple strictures and chain of lake calcification. Pancreatic calculi located in the head and body of the pancreas particularly amenable to endotherapy. In our study out of 18 patients with stricture 6 had successful endotherapy with PD stenting. Response is not assessed as we did not follow up the patient. Large pancreatic pseudocyst communicating with MPD, pancreatic ascites and pancreatic pleuro fistula are the conditions responded dramatically to endotherapy with more than 90% benefited symptomatically with in 1 week. These patients underwent transpapillary stents because of PD disruption as it converts the high pressure ductal system into a low pressure one with preferential flow across the stents. Our results are similar to Telford JJ et al study with respect to PD stenting in PD disruption showing >90% response rate when you bridge the stent across the disruption. CBD strictures occur in 3%-46% of patients with CP. Strictures can be reversible due to inflammation or compression with a pseudocyst. They are irreversible following fibrosis. 10 patients had biliary stricture with obstructive jaundice and raised alkaline phosphatase levels. All these patients underwent CBD stenting with single or multiple plastic stents and LFTs normalized on follow up of these patients. Catalano et al performed a non-randomized study comparing single and multiple plastic stents in CP related BBS. Clinically, success was reported in 92% with multiple stents as compared to 24% with single stents. Our study also revealed the similar results with more than 90% success rate. Limitations of our study were that we did not follow up the patients with Pancreatic stricture after PD stenting whether they are responded to endotherapy or not. We don't have ESWL treatment procedure for stones more than >5 mm at our Institute and excluded from the study.

In conclusion Pancreatic endotherapy provides a less invasive alternative to surgery for chronic pancreatitis-related ductal hypertension. Although endotherapy has clinical outcomes that are comparable to surgery and has lower morbidity and mortality rates, recent long-term outcome data appears to favour surgery.

Nevertheless, endotherapy remains a cornerstone in the management of patients with chronic pancreatitis, as it may reduce the need for surgical procedures, act as a bridge to surgery in poor surgical candidates, or predict the response to surgical drainage.

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