

Chapter 27

**Surgery in Chronic Pancreatitis:
the Deva Matha/PVS/Lakeshore experience**

Ramesh H

Summary

We discuss our experience with surgery for chronic pancreatitis, and also comment on a proposal for a new grading system for the disease. The most common indication for surgery at our center was the setting of an inflammatory mass with a high suspicion of malignancy. 11 patients died in the postoperative period (mortality 2.6%). Major and minor complications occurred in 17% of cases. Excellent pain relief after surgery was seen with 56% of the cases. Early relapse of pain was related to technical factors, while persistent malabsorption as well as underlying malignancy accounted for the late relapses.

Introduction

Chronic pancreatitis implies an irreversible change in the parenchyma and ductal elements of the pancreas. The commonest causes of chronic pancreatitis in Kerala are a) the idiopathic or tropical pancreatitis and b) chronic pancreatitis due to alcohol abuse. Regardless of etiology, chronic pancreatitis affects young men and women in the prime of their lives and takes a heavy toll on the quality of life and productivity of the individual. Therapy is directed at relieving the symptoms and forestalling complications. In a subset of patients with chronic obstructive pancreatitis, however, complete reversibility of the pathology is a possibility. Chronic obstructive pancreatitis occurs due to obstruction of the pancreatic duct by a stricture or stone. Upstream dilatation of the duct results; there is little or no fibrosis and no calculi formation; functional changes in the pancreas are also minimal. This disease is treatable by ductal decompression. The pathogenesis of pain and complications in chronic calcifying pancreatitis is more obscure. Ductal/parenchymal hypertension, nerve inflammation, and pressure of pseudocysts have been the most acceptable etiological factors.

Approach to treatment planning for patients with chronic pancreatitis:

This is based on the following key questions: Does the patient have pain? Is the pain sufficiently severe to hinder normal lifestyle? Are there any complications?

What is the functional state of the pancreas?

Patients are classified according to the ABC system¹

This is a grading system to assess the morbidity of chronic pancreatitis.¹ The proposed grading system takes into account the degree of pain and the presence or absence of diabetes, malabsorption as well as local complications (see table 1).

Table 1. The proposed grading system

A: No pain
A0: no diabetes or steatorrhea
A1: diabetes mellitus only
A2: steatorrhea only
A3: Both diabetes and steatorrhea
B: Pain present, but no complications
B0: no diabetes or steatorrhea
B1: diabetes mellitus only
B2: steatorrhea only
B3: Both diabetes and steatorrhea
C: Complications present (pain is usually present but some complications such as biliary obstruction or portal hypertension may be entirely pain free)
C0: no diabetes or steatorrhea
C1: Diabetes mellitus only
C2: Steatorrhea only
C3: diabetes mellitus and steatorrhea

Group A patients: Those without pain, or complications, do not warrant treatment except for replacement of pancreatic function, endocrine or exocrine.

Group B patients: Treated with spasm-analgesics, narcotic analgesics in some, and endoscopy or surgery in those without response to medical treatment and where normal lifestyle is interfered with. Exocrine or

endocrine deficiency is treated on its own merit.

Group C patients: warrant energetic treatment of complications, which may threaten the life of the patient.

Chronic pancreatitis and pancreatic cancer

There have been many reports, which have established the nexus between chronic pancreatitis and cancer². In our experience, pancreatic cancer has never been seen in a patient with chronic pancreatitis due to alcohol abuse. The supervision of cancer in pancreatitis considerably diminishes the outlook of patients with chronic pancreatitis. Most cancers are advanced at the time of diagnosis and treatment is uniformly unsuccessful. Pre-operative identification of cancer is based on the following; (1) CT scan appearance which reveals obvious tumour with vascular invasion (may be fallacious) (2) High CA 19-9 level. (Values above 300 U/ml are 100% specific though only 20% sensitive). Lower values may not be contributory (3) Fine needle cytology and (4) Presence of jaundice in a head mass of levels greater than 5 mg/dl indicate cancer with a sensitivity and specificity of over 90%. The outcome following resection of pancreatic cancer in chronic pancreatitis is poor; the unit policy is to offer surgical resection only to those patients who are strongly motivated to and demand surgical excision. Resection is preceded by counseling and discussion with the patient and his family. In patients without obvious evidence of pancreatic cancer, therapy is more beneficial. The aims of surgical therapy in chronic pancreatitis are; (a) To relieve pain (b) To forestall complications or treat them (c) To preserve functioning pancreatic parenchyma (d) to decrease morbidity and mortality and (e) to preserve quality of life.

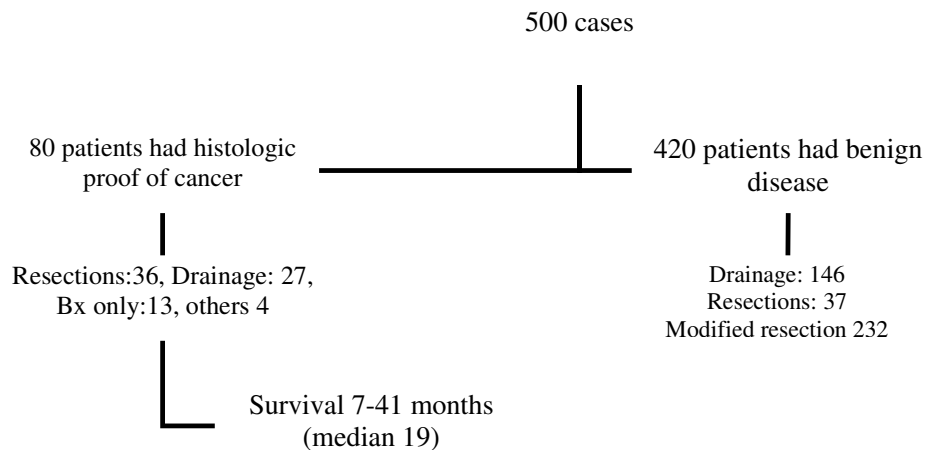
Patient data from our centers

An analysis of the indications, types and results of surgery for the first 500 patients treated in the Unit (1983 to 1997) are presented (see table 2).

Table 2. Indications for surgery

Indication	Number
Intractable pain	457
Pseudocysts/abscesses	58
Inflammatory mass with suspicion of malignancy	92
Biliary obstruction	62
Pancreatic ascites/pleural effusion	19
Others (GI bleed, intestinal obstruction, hollow viscus perforation)	17

Figure 1. Surgeries at our center: a chart



Mortality, morbidity, pain relief and quality of life

Eleven patients died in the postoperative period (mortality 2.6%). Major and minor complications occurred in 17% of cases. Pain relief scores were as follows:

- (A) no pain whatsoever: 56%
- (B) occasional pain (less than once a year and not requiring to report to hospital): 14%
- (C) Pain frequency once or more per year (out patient): 12%
- (D) Pain relieved by hospitalization: 13%
- (E) unrelieved pain requiring reintervention: 5%

Table 3. Summary of the data from our centers

- a) Failures (recurrence of pain) occurred early (within 48 months) and obvious technical factors could be identified.
- b) Multivariate analysis identified incomplete stone clearance and absence of ductotomy on to the head as significant causes of recurrent pain and surgical failure³.
- c) Late failures were due to abdominal pain associated with severe fat indigestion (relieved by high dose pancreatic enzymes) or malignancy (4 patients).
- d) Patients with resections fared poorly due to pancreatic insufficiency and requirement for expensive, high dose pancreatic enzymes, poor maintenance of body weight and disabling steatorrhea. Although pain was relieved by resection, overall quality of life was poor⁴.
- e) Head coring combined with lateral drainage provided the best combination of parenchyma preservation with good clearance of stones and strictures in the head region, and this resulted in the best quality of life and pain relief.
- f) Patients with intractable pain and normal sized ducts also benefit from drainage procedures with excellent pain relief and quality of life. Resections can thus be avoided⁵.

References

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