

LIFE AFTER FREY'S OPERATION; ASSESSMENT OF QUALITY

Frey ameliyatı sonrasında yaşam kalitesinin değerlendirilmesi

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J Surg Arts (Cer San D), 2015(1):13-15.

<http://dx.doi.org/10.14717/jsurgarts.2015.174>

ABSTRACT

Patients with chronic calcific pancreatitis may require surgery because of intractable pain, suspicion of malignancy or exocrine and endocrine dysfunction. We selected 43 patients of chronic calcific pancreatitis out of which 28 underwent Frey's procedure from January 2009 to January 2012. Among the 28 post operative patients 24 patients (85.7%) had significant pain relief and 25 (89.2%) had 5% weight gain from their preoperative status. No patients had diarrhea. Four out of 6 (66.6%) had diminished insulin requirement. Twenty six (92%) cases reported to have good psychological well being.

On the other hand we had 15 patients of chronic pancreatitis who were not put on Frey's operation. They were treated with enzyme replacement and analgesics .Among them only 1 did not complain pain even after 6 months. Rest 14 (93.3%) were admitted more than twice during the course of the study. Only 2 (13.3%) gained weight by 5% and 1out of 9 patients had diminished insulin requirement. None reported to have good psychological well being.

Key words: Chronic pancreatitis, quality of life and Frey's syndrome.

ÖZET

Kronik kalsifikasyonlu pankreatitler inatçı ağrı, malignite şüphesi veya endokrin / ekzokrin fonksiyon yetersizliği nedeniyle ameliyat gerektirebilirler. Ocak 2009 ile Ocak 2012 tarihleri arasında saptanan 43 Kronik kalsifikasyonlu pankreatit vakamızın 28'inde Frey ameliyatı yaptık. Ameliyat edilen 28 hastanın 24'ünde (%85.7) ağrı önemli oranda giderildi. Vakaların 25'inde (%89.2) hastalarda %5'lik bir kilo artışı oldu. Diare gözlenmedi. İnsülin kullanan 6 hastanın 4'ünde (%66.6) doz azaltıldı. 26 hasta (%92) ise psikolojik olarak iyi durumdaydılar.

Kronik pankreatiti olan ve Frey ameliyatı yapılmayan 15 hastamızda ise enzim replasmanı ve ağrı kesiciler kullanıldı. Sadece bir hasta 6 ay sonrasında bile ağrıdan şikayetçi olmazken, 14 hasta ise çalışma döneminde ikiden fazla sayıda hastaneye yatırıldılar. Sadece 2 (%13.3) hastada %5'den fazla kilo artışı oldu. Dokuz hastadan birinde insülin ihtiyacı azaldı. Ancak, hastaların hiçbiri psikolojik bakımdan iyi durumda değillerdi.

Anahtar kelimeler: Kronik pankreatit, yaşam kalitesi ve Frey sendromu.

INTRODUCTION

Chronic calcific pancreatitis is a debilitating progressive disease in which one of the major end points of treatment is improvement in the quality of life. Abdominal pain, chronic diarrhea, low body weight and unemployment all lead to reduced physical and emotional quality of life (QOL). Medical, surgical, endoscopic treatments have all been tried with varying success.

MATERIAL AND METHOD

To evaluate the role and effectiveness of Frey's procedure in improving the quality of life in this group of patients, We carried out a combined retrospective - prospective study on 43 patients of chronic calcific pancreatitis out of which 28 underwent Frey's procedure from January 2009 to January 2012. The improvement in pain, weight loss, diarrhea, insulin requirement and psychosocial well being were

assessed both pre and post operatively and the results analyzed statistically.

RESULTS

In our study it has been found that pain relief, weight gain, decrease in insulin requirement and physiological well being all are significant in patients treated with Frey's operation as compared to those of non operative group.

The quality of life improved in a significant proportion of patients following Frey's operation. Twenty four patients (85.7%) had significant pain relief, 25 (89.25%) had 5% weight gain from their preoperative status, no patients had diarrhea, 4 out of 6 (66.6%) had diminished insulin requirement and 26 (92%) cases reported to have good psychological well being (Figure 1, Table 1). However it requires studies matched for age, gender, addictions and other factors and followed up for longer durations to make a more assertive statement.

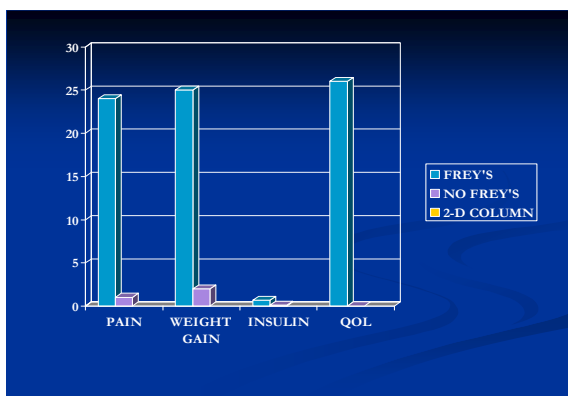


Figure 1: The quality of life improved in a significant proportion of patients following Frey's operation.

Table 1: Pain relief was significantly high in the patients following Frey's procedure.

	Frey's procedure	None Pro..	P value
n	28	15	
No pain	24	1	0.000000745
Weight gain	25	2	0.000001213
Insulin ↓	4/6	1/9	0.03075
QOL ↑	26	0	<0.0000001

DISCUSSION

CP is characterized as an irreversible, irregular fibrosis of the gland with destruction of the exocrine structure and ductal distortion. CP is a slow process evolving clinically in two stages, i.e. early-stage CP with recurrent clinical acute pancreatitis, and late-stage CP with exocrine insufficiency, diabetes and calcification (1-3).

The primary therapy for CP is conservative, symptom-related treatment, which is difficult and challenging for every physician (4,5). Relieving pain is the first step. This symptom needs to be controlled often with narcotics, which can cause dependence. Diarrhea usually indicates the presence of steatorrhea, which is often treated with a high-calorie, high protein, and low-fat diet to minimize symptoms of the underlying disease and to promote weight retention or gain. Pancreatic replacement therapy is used to combat maldigestion and malabsorption. Patients with diabetes may need insulin therapy for glycemic control. The use of parenteral nutrition for bowel rest is a standard approach in patients with symptomatic CP. Surgery should be considered in patients who fail to respond to medical therapy.

Traditionally, drainage procedures were reserved for dilated duct disease. Controversy exists in the presence of head mass, as the pancreatic duct dips deep in to the parenchyma and drainage procedures are ineffective (6). Izbicki et al reported that duodenum-preserving resection of the head of the pancreas are equally safe and effective with regard to pain relief, improvement of quality of life, and definitive control of complications affecting adjacent organs (7). Although resective procedures like pancreaticoduodenectomy were accepted as a safe procedure for head mass, Farkas and colleagues reported longer operating time, increased postoperative morbidity, longer hospital stay and lower quality of life scores following pancreaticoduodenectomy compared to organ preserving resections for head dominant disease. Hence in recent years, there has been a shift from resectional procedures toward more organ preserving resections proposed by Beger and Frey, which combine features of resection and drainage (8,9). Frey et al analyzed the relation between weight of the cored tissue and pain relief, the amount of the tissue cored depends on the size of the head (10).

Frey's procedure leads to significant and sustained long-term pain relief in patients with chronic pancreatitis (11).

Falconi et al reported that in 40 patients with CP treated by Frey's procedure, preoperative pain was present in 38 patients (95%), and the 1-, 2-, 3-, and 5-year pain-free rates were 94.7%, 93.7%, 87.5% and 90%, respectively (5). Both the body mass index and quality of life showed statistically significant improvements at all follow up intervals. Falconi et al also reported that 10% (3 patients) developed diabetes, whereas for 4 patients, insulin therapy was no longer necessary (2).

Frey procedure can be performed with zero mortality and low morbidity in a high-volume center. It provides good pain relief in majority of the patients. Volume of the head mass cored affects pain outcome. Correlation between poor results in terms of pain relief, and weight loss following Frey's procedure, and small duct disease supports the view that duct diameter is an important predictor of pain relief (12). In

another study it has been shown that Frey procedure appears as a safe technique with low mortality and morbidity rates and allows effective pain relief in about 90% of patients (13). The decreased incidence of postoperative diabetes after the duodenum-sparing operations may be the result of a preserved beta-cell mass in the more conservative resections, and may also be due to the conservation of the pancreatic polypeptide-secreting cells localized to the posterior head and uncinata process (14). Preservation of near-normal glucose metabolism and the avoidance of pancreaticogenic diabetes is a significant benefit of the newer operative procedures (15).

REFERENCES

1. Lehmann FS, Beglinger C. Mechanisms of pain in chronic pancreatitis. In: FALK Symposium No: 143, Pancreatitis: Advances in Pathobiology, Diagnosis and Treatment. Springer, Dordrecht, The Netherlands; 2005, p:167-75.
2. Lee DK. Natural course and medical treatment of chronic pancreatitis. *Korean J Gastroenterol.* 2005; 46(5):345-51.
3. Takada T, Yasuda H, Amano H, Yoshida M, Uchida T. Current surgical trends in Japan for managing chronic pancreatitis. *Pancreas* 1998;16(3): 337-42.
4. Giger U, Stanga Z, DeLegge MH. Management of chronic pancreatitis. *Nutr Clin Pract* 2004;19(1): 37-49.
5. Falconi M, Bassi C, Casetti L, et al. Long-term results of Frey's procedure for chronic pancreatitis: a longitudinal prospective study on 40 patients. *J Gastrointest Surg.* 2006;10(4):504-10.
6. Frey CF. The surgical management of chronic pancreatitis: the Frey procedure. *Adv Surg.* 1999; 32(1):41-85.
7. Izbicki JR, Bloechle C, Knoefel WT, et al. Duodenum-preserving resection of the head of the pancreas in chronic pancreatitis. A prospective, randomized trial. *Ann Surg.* 1995;221(4):350-58.
8. Farkas G, Leinder L, Daroczi M, Farkas G Jr. Prospective randomized comparison of organ-preserving pancreatic head resection with pylorus preserving pancreaticoduodenectomy. *Langenbecks Arch Surg.* 2006;391(4):338-42.
9. Beger HG, Witte C, Krutezberger W, Bittner R. Experience with duodenum-sparing pancreas head resection in chronic pancreatitis. *Chirurg.* 1980; 51(5):303-7.
10. Frey CF, Amikura K. Local resection of the head of the pancreas combined with longitudinal pancreaticojejunostomy in the management of patients with chronic pancreatitis. *Ann Surg.* 1994;220(4): 492-507.
11. Negi S, Singh A, Chaudhary A. Pain relief after Frey's procedure for chronic pancreatitis. *Br J Surg.* 2010;97(7):1087-95.
12. Amudhan A, Balachandar TG, Kannan DG, et al. Factors affecting outcome after Frey procedure for chronic pancreatitis. *HPB (Oxford).* 2008;10(6): 477-82.
13. Pessaux P, Kianmanesh R, Regimbeau JM, et al. Frey Procedure in the Treatment of Chronic Pancreatitis: Short-term Results. *Pancreas,* 2006;33(4): 354-8.
14. Slezak LA, Andersen DK: Pancreatic resection: Effects on glucose metabolism. *World J Surg* 2001;25(4):452-60.
15. Seymour NE, Brunnicardi FC, Chaiken RL, et al: Reversal of abnormal glucose production after pancreatic resection by pancreatic polypeptide administration in man. *Surgery,* 1988;104(2):119-29.