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Original Article

A Study on Changing Clinical Profile of Chronic Pancreatitis from a Tertiary Care Centre

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Abstract

Background: Idiopathic chronic pancreatitis (ICP) is the most common etiology of CP in most of the studies in India. However, a change in etiological pattern has been observed recently.

Aim: To study the clinical profile of recently admitted cases of CP during last 1 year and to compare them with cases during previous 5 years.

Patients and Methods: The clinical profile of 150 cases of CP admitted during past 5 years (Group A) was compared with 31 cases of CP seen during last 1 year (Group B).

Results: Both the groups had male preponderance. The mean duration of disease was 3.09 years in Group A and 1.12 years in Group B. Pain was the most common presentation in both groups. Steatorrhea was significantly higher in Group A (37.33% vs. 9.68%) (P = 0.0009). In contrast, ascites (8% Group A vs. 29.23% Group B [P = 0.0009]) and pseudocyst (6.67% Group A vs. 19.35% Group B [P = 0.023]) were more common in Group B. Diabetes at presentation was observed in 22% cases in Group A and 13% in Group B. The most common etiology in Group B was alcohol (55%) which was the cause in 21% in Group A (P < 0.0002), whereas ICP in Group B is significantly lower compared to Group A (48.39% vs. 76.67%, P < 0.0002). 15% in Group A and 6.45% in Group B needed surgery.

Conclusions: There seems a recent trend of increase in alcoholic CP in our set up during last 1 year. However, further studies are necessary for a firm conclusion.

Key words: Calcific, Chronic pancreatitis, Idiopathic, Pseudocyst, Steatorrhea, Tropical

INTRODUCTION

Chronic pancreatitis (CP) is defined as an inflammatory disease of the pancreas characterized by persistent and often progressive lesions, leading to pain and/or exocrine and endocrine insufficiency.[1] Pain is usually the most frequent complaint with which most of these patients present. The loss of endocrine and exocrine function which gradually develops leads to symptoms such as weight loss, anorexia, steatorrhea, and symptoms of diabetes. It is a major health problem worldwide and is associated with considerable morbidity. Alcohol is the most common cause of CP worldwide whereas idiopathic chronic pancreatitis (ICP) is the most common etiology of CP in most of the studies in India.[2,3] Recently, there is increase alcohol intake in our population, and number of alcoholic liver diseases is also increasing. In this study, we intended to highlight the clinical profile of recently admitted cases of CP during last 1 year and to compare them with cases during previous 5 years.

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PATIENTS AND METHODS

The present study was conducted in the Department of Gastroenterology, Shrirama Chandra Bhanj Medical

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College, Cuttack, Odisha. Retrospective analysis of the clinical profile of 150 cases of CP admitted during past 5 years (Group A) was compared with 31 cases of CP seen during last 1 year (Group B). Detailed history, physical examination, fasting blood glucose, serum amylase, lipase level, and CA 19-9 were studied. Ultrasound (USG) abdomen and pelvis, CT scan reports were reviewed and analyzed.

Statistical analysis was performed with SPSS 16.0 software; $P < 0.05$ was considered statistically significant. The significance of the difference between two independent proportions was calculated by Z ratio.

RESULTS

Total number of patients in Group A was 150 and in Group B was 31. Male patients predominate in both the groups. The mean age of presentation in Group A was 35.70 ± 13.08 years and in Group B was 39.16 ± 13.12 years. Majority of patients in both groups were in age group of 30-40 years. The mean duration of disease in Group A was high, i.e., 3.09 years as compared to 1.12 years in Group B (Table 1).

Pain was the most common presentation in both groups (86% vs. 96.77%, $P = 0.09$), followed by vomiting (41% vs. 39%, $P = 0.83$). Oily leak was significantly higher in Group A (37.33% vs. 6.45%, $P = 0.0002$) than patients in Group B. Other symptoms such as diarrhea (18% vs. 6.45%, $P = 0.11$), vomiting (41% vs. 39%, $P = 0.83$), and duodenal obstruction (6.66% vs. 6.45%, $P = 0.47$) were comparable between the two groups. 22% of patients in Group A and 13% of patients in Group B were diabetic at presentation (Table 2). Of calcific pancreatitis 20% in Group A and 25% in Group B were diabetic.

The most common etiology in Group B was alcohol (55%) which was the cause in 21% in Group A ($P < 0.0002$), whereas idiopathic CP in Group B is significantly lower compared to Group A (48.39% vs. 76.67%, $P < 0.0002$), only one patient in Group A had familial pancreatitis, as depicted in Table 3.

As shown in Table 4, complications such as pseudocyst (6.67% vs. 20%, $P = 0.023$) ascites (8% vs. 29.23%, $P = 0.0009$), and pleural effusion (0.6% vs. 19.35%, $P < 0.0002$), were significantly more common in Group B. Two patients (1.33%) in Group A and 1 (3.22%) in Group B developed malignancy in due course of the disease.

Pancreatic parenchyma was either normal (35% vs. 10%, $P = 0.0004$) or compressed (24% vs. 6.45%, $P = 0.029$) in significantly more proportion of cases in Group A than Group B on USG of abdomen. Parenchymal enlargement (13% vs. 45%, $P < 0.0002$) and atrophy (6.67% vs. 22.58%, $P = 0.005$) were observed significantly more proportion of cases in Group B. Calcification was noted more in Group A as compared to Group B (86.66% vs. 38.70%, $P < 0.0002$) as shown in Table 5a. Dilated main pancreatic duct was observed significantly more number of cases in

Table 1: Comparison of parameters between the two groups

Parameters	Group A *n*=150 (%)	Group B *n*=31 (%)	*P* value
Sex			
Male	100 (67.33)	25 (80.65)	0.12
Female	50 (32.67)	6 (19.35)	0.12
Mean	35.70±13.08	39.16±13.12	0.53
Age (years)			
<20	16 (10.67)	3 (9.08)	0.86
20-39	35 (23.33)	3 (9.68)	0.08
30-39	40 (26.67)	9 (29.03)	0.78
40-49	35 (23.33)	9 (29.03)	0.378
50-59	15 (10)	5 (6.13)	0.321
>60	9 (6)	2 (4.5)	0.92
Mean duration of disease in years	3.09	1.12	0.33

Table 2: Comparison of clinical parameters between both the groups

Clinical features	Group A *n*=150 (%)	Group B *n*=31 (%)	*P* value
Pain	129 (86)	30 (96.77)	0.09
Oily leak	56 (37.33)	3 (9.68)	0.0002
Diarrhea	27 (18)	2 (6.45)	0.11
Duodenal obstruction	16 (6.66)	2 (6.45)	0.47
Vomiting	61 (40.66)	12 (38.70)	0.83
Diabetic	33 (22)	4 (12.94)	0.253

Table 3: Comparison of etiology between two groups

Etiology	Group A *n*=150 (%)	Group B *n*=31 (%)	*P* value
Alcoholic	32 (21.33)	17 (54.84)	<0.002
Idiopathic	117 (76.67)	15 (48.39)	<0.0002
Familial	1 (6.7)	0	0.64

Table 4: Comparison of complications between the two groups

Complications	Group A *n*=150 (%)	Group B *n*=31 (%)	*P* value
Pseudocyst	10 (6.67)	6 (19.35)	0.023
Ascites	12 (8)	9 (29.23)	0.0009
Pleural effusion	1 (0.6)	6 (19.35)	<0.0002
Malignancy	2 (1.33)	1 (3.23)	0.45

Group A (77.33% vs. 48.39%, $P = 0.001$) as compared to Group B on contrary more patients in Group B had normal pancreatic duct than Group A (15.33% vs. 48.39%, $P < 0.0002$) (Table 5b).

On comparing alcoholic pancreatitis patients in both groups, age at presentation was 3rd to 4th decade, duration of disease was more in Group B (4.58 vs. 9.48 years, $P = 0.002$). Pain abdomen was the most common presentation followed by vomiting. Complications such as pseudocyst (6.25% vs. 35.29%, $P = 0.0008$), ascites (6.25% vs. 35.25%, $P = 0.0008$), and pleural effusion (3.13% vs. 17.655, $P = 0.007$) were significantly higher in Group B as compared to Group A patients as depicted in Table 6.

Majority of our patients were managed conservatively (85.33% vs. 93.55%, $P = 0.214$), only 14.66% (22/150) in Group A and 6.45% (2/31) in Group B were managed by surgery, i.e., lateral pancreaticojejunostomy for intractable pain, and in one patient pain recurrence even after surgery. Diabetes was well controlled in our patients most were managed with an oral hypoglycemic agent (OHA), only (15.15%) in Group A and none in Group B needed insulin for blood sugar control.

Table 5a: Comparison of USG finding between Groups A and B

Pancreatic parenchyma	Group A *n*=150 (%)	Group B *n*=31 (%)	*P* value
Normal	53 (35.33)	3 (9.68)	0.0004
Enlarged	19 (12.67)	14 (45.16)	<0.0002
Compressed	36 (24.00)	2 (6.45)	0.029
Shrunken	32 (21.33)	5 (16.13)	0.513
Atrophic	10 (6.67)	7 (22.58)	0.005
Calcification	130 (86.66)	12 (38.70)	<0.0002

USA: Ultrasound

Table 5b: Comparison of USG finding between Groups A and B

Pancreatic duct	Group A *n*=150 (%)	Group B *n*=31 (%)	*P* value
Normal	23 (15.33)	15 (48.39)	<0.0002
Not imaged	11 (7.33)	1 (3.23)	0.402
Dilated	116 (77.33)	15 (48.39)	0.001

USA: Ultrasound

Table 6: Comparison of clinical features of alcoholic pancreatitis between the two groups

Parameters	Group A *n*=32 (%)	Group B *n*=17 (%)	*P* value
Age	37.59±9.39	42.05±9.26	0.06
Duration of disease	4.58	9.48	0.002
Pain	31 (96.88)	16 (94.12)	0.642
Oily leak	10 (31.25)	1 (5.88)	0.0002
Diarrhea	5 (15.63)	0 (0)	0.085
Duodenal obstruction	16 (6.66)	2 (6.45)	0.47
Vomiting	12 (37.5)	7 (41.18)	0.801
Diabetic	4 (12.50)	2 (11.76)	0.940
Pseudocyst	2 (6.25)	6 (35.29)	0.0008
Ascites	2 (6.25)	6 (35.29)	0.0008
Pleural effusion	1 (3.13)	3 (17.65)	0.007
Calcification on USG	28 (87.50)	5 (29.41)	<0.0002

USA: Ultrasound

DISCUSSION

CP is not uncommon in our part. The mean age of presentation in our population was 3rd to 4th decade, and male outnumbered female in both the groups which were also reported in studies from the north and south India.[3-5] Pain was the most common presentation in both the groups, which was similar to studies by Garg *et al.*[6] 22% of patients in Group A and 13% of patients in Group B were diabetic at presentation and nearly one-fourth patients in each group having intraductal and parenchyma calcification on USG were diabetic which is lower as compared to reports published by Balakrishnan *et al.* (40%).[3] All the acute complications were more common in Group B as compared to Group A and exocrine (steatorrhea) and endocrine deficiency (diabetes) were more commonly found in Group B. This may be due to long duration disease in Group A (3.09 vs. 1.02 years). In this study, 1-3% of the subjects in both groups had pancreatic malignancy. This is lower than the previously described rate of adenocarcinoma complicating tropical pancreatitis (25%).[7,8] Prospective studies are required to detect the true incidence and prevalence of adenocarcinoma complicating CP in India. Idiopathic was the most common etiology in Group A, but there is an upsurge of alcohol as an etiology of CP at present date in our state this is due to change in lifestyle, economic growth in our population.[9] All the previous studies including our study in Group A (during past 5 years) done across the country reported idiopathic pancreatitis as most common form of CP.[4,5] Pancreatic parenchymal and ductal calcification and ductal dilatation were observed more in Group A, whereas enlarged pancreas noted more commonly in Group B this may again be due to long duration of disease in Group A and more alcoholic pancreatitis in Group B. Comparing alcoholic pancreatitis in both groups clinical profile was same, but the local complication was more in Group B. About 85% of patients in Group A and 93% of our population managed conservatively with enzyme supplementation and analgesics for pain, OHA for blood glucose control. Only 15% in Group A and 6% patients in Group B needed surgery for intractable pain.

There is a small number of patients in Group B as compared to Group A, however, this is an ongoing study

better comparison will be expected in future. The duration of disease in group A was more as compared to Group B.

CONCLUSIONS

There seems a recent trend of increase in alcoholic CP in our set up during last 1 year. However, further studies are necessary for a firm conclusion.

REFERENCES

1. Clain JE, Pearson RK. Diagnosis of chronic pancreatitis. Is a gold standard necessary? Surg Clin North Am 1999;79:829-45.
2. Steer ML, Waxman I, Freedman S. Chronic pancreatitis. N Engl J Med 1995;332:1482-90.
3. Balakrishnan V, Unnikrishnan AG, Thomas V, Choudhuri G, Veeraraju P, Singh SP, *et al.* Chronic pancreatitis. A prospective nationwide study of 1,086 subjects from India. JOP 2008;9:593-600.
4. Bhasin DK, Singh G, Rana SS, Chowdry SM, Shafiq N, Malhotra S, *et al.* Clinical profile of idiopathic chronic pancreatitis in North India. Clin Gastroenterol Hepatol 2009;7:594-9.
5. Choudhuri G, Bhatia E, Sikora SS, Alexander G. Tropical pancreatitis in north India. In: Balakrishnan V, Kumar H, Sudhindran S, Unnikrishnan AG, editors. Chronic Pancreatitis and Pancreatic Diabetes in India. Cochin: Indian Pancreatitis Study Group; 2006. p. 53-9.
6. Tandon RK, Sato N, Garg PK. Consensus study group. Chronic pancreatitis: Asia-Pacific consensus report. J Gastroenterol Hepatol 2002;17:508-18.
7. Chari ST, Mohan V, Pitchumoni CS, Viswanathan M, Madanagopalan N, Lowenfels AB. Risk of pancreatic carcinoma in tropical calcifying pancreatitis: An epidemiologic study. Pancreas 1994;9:62-6.
8. Mori M, Hariharan M, Anandakumar M, Tsutsumi M, Ishikawa O, Konishi Y, *et al.* A case-control study on risk factors for pancreatic diseases in Kerala, India. Hepatogastroenterology 1999;46:25-30.
9. Das SK, Balakrishnan V, Vasudevan DM. Alcohol: Its health and social impact in India. Natl Med J India 2006;19:94-9.

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