

Managing Acute Pancreatitis with Ayurveda – A Case Report

Dr. Pooja Sharma¹, Dr. Nitin Sharma², Dr. Divya Kajaria³

¹Department of Kayachikitsa, All India Institute of Ayurveda, Sarita Vihar, Gautam Puri, New Delhi

²Medical Officer, CHC, Khairthal Alwar, Rajasthan

³Assistant Professor, Department of Kayachikitsa, All India Institute of Ayurveda, Sarita Vihar, Gautam Puri, New Delhi

Email address: ¹drpoojansharma @ gmail.com, ²drnitinsharma @ gmail.com, ³divyakajaria @ gmail.com

Abstract— Acute pancreatitis is the sudden inflammation of the pancreas and is histologically characterized by acinar cell destruction of pancreas that may be mild or life threatening. A 40-year alcoholic male patient complained of mild pain in abdomen associated with nausea and vomiting reported in OPD. CT findings suggestive of acute pancreatitis with mild ascites and bilateral pleural effusion (modified CT severity index is 6) with high serum amylase concentrations. Due to resemblance of the chief complaints of patient with the symptoms of Pittaja Gulma, he was treated on the principle of Pittaja Gulma. After 7 days of treatment with Ayurvedic medicines, serum marker returns to its normal range and ultrasonography showed there is no abnormal finding. The effectiveness of the therapy has been found satisfactory and the improvements in clinical as well as laboratory findings are found statistically significant ($p < 0.001$).

Keywords— Acute pancreatitis, Pittaja Gulma, Sarmsana, Medicated Ghrita.

I. INTRODUCTION

Pancreatitis is a serious clinical condition that manifests in either its acute or chronic forms. The underlying pancreatic disease especially if asymptomatic, the diagnosis can be missed. The etiologies of pancreatic ascites¹⁻² and pancreatic pleural effusions²⁻³ are identical and not infrequently they are seen together in the same patient. The patient with acute pancreatitis have abdominal pain, persistent vomiting, and fever. The diagnosis is made on the basis of laboratory findings including serum markers such as S. Amylase (table 1), S. Lipase (image 1) and CT abdomen.⁴⁻⁵ (image 2)

II. CASE PRESENTATION

A 40 years old male approached to OPD of Kayachikitsa, All India Institute of Ayurveda hospital, New Delhi on march 2019, with mild epigastric abdominal pain radiating to the back associated with nausea and vomiting. The patient was complained of pain radiating to the back as well as right scapular region that aggravates with food intake, particularly spicy as well as oily food. He was very much disturbed emotionally and was anxious as well as mildly depressed, on clinical evaluation. He complained with similar episodes of pain in past that were managed temporarily, with analgesics and antibiotics. He was addicted to alcohol from almost 5 years with regular intake, which he alleged to have stopped from the last 1 year. On examination of vitals - pulse rate was found to be 72/min., heart rate was 70/min, blood pressure was 110/70 mm Hg (right arm sitting), temperature was 98.4°F (armpit), respiration rate was recorded as 17 min and body weight was 45 Kg, having height of 160cm on measurement. He was emaciated; abdomen was of normal contour with no dilated veins, no visible peristalsis, no striae and no any surgical scars. On palpation, tenderness graded as 3 was elicited in the epigastric, umbilical, left hypochondriac and left

lumbar region. His laboratory tests revealed haemoglobin level of 14.0 g/dL, serum amylase-118 IU/L, serum lipase - 100 IU/L, SGOT-70 u/l and SGPT-84 u/l. CECT abdomen revealed of acute pancreatitis with small peripancreatic fluid collection, mild ascites and mild bilateral pleural effusion.

There is no exact correlation to acute pancreatitis in Ayurveda. It may be correlate with *Pittaja Gulma*. On the basis of aetiology and presenting complaints the *Doshika* predominance can be comprehend. As the patient had been taken alcohol for long duration it was very clear that there is vitiation of *Rakta*⁶⁻⁷ as per Acharya Charaka verse (Ca. Su. 24:5) and vitiation of *Medovaha srotasa* (Ca. Vi. 5:16). *Rakta* is the causative factor for the suppurative as indicated by Acharya Charaka in *Gulma* treatment (Ca. Chi. 5:37). Now due to *Ashraya Ashrayeebhava* of *Rakta* and *Pitta*, the vitiated *Rakta* causes vitiation of *Pitta* which quickly causes suppuration. Considering the aetio-pathogenesis and diagnosis the treatment was planned focusing *Pitta-Shamana* (pacifying *Pitta*), *Rakta- Prashadaka* (blood purifier) and *Medovaha Sroto-Sodhaka*. Based on this treatment principle medicines like *Pancha tikta Ghrita Guggulu*⁸, *Drakshavleha*⁹ and *Trivrita churna* (table 2) were given for 7 days and restriction of diet is advised.

After three days, patient attended OPD for first follow up with relief in abdominal pain, no vomiting on taking semi liquid diet. On abdominal examination there was no tenderness in digastric region. Patient was suggested to continue the same treatment for next 4 days with normal diet. After 4 days, patient attended OPD for second follow up. Patient was suggested to repeat serum amylase and lipase tests and abdominal sonography to evaluate the improvement. The investigations were done and recorded as normal (image 3, 4). Ultrasonography (image 5) of abdomen revealed right renal calculus and few left renal calculi but CT abdomen patient could not repeat again due to restriction of exposure hazard (CT is not permissible to be carried out within 15 days). As

maintenance therapy, he was advised to continue Bhunimbadi kwath 2 table spoon full twice a day with normal water for 15 days. No further episodes were reported for the next three months

III. DISCUSSION

The present case is worth enough to be discuss as it helps to understand the efficacy as well as utility of fundamentals of Ayurvedic treatment methodology in treating the complicated cases. The case above discuss is a case of acute pancreatitis complicated with pleural effusion and mild ascites. Most of the time, in such cases the patient seeks contemporary medicines due to severe pain, vomiting and restlessness associated with the disease and if rarely anyone took Ayurvedic medicines it may be either as add-on therapy or just to compensate the long- term side-effects caused by the contemporary medicines (if any). And unfortunately in such rare instances most of them remains undocumented, making it difficult to rationalized the treatment protocol. In the above case it is tried to use very simple herbal medicines based on treatment principle that are easily available so that the results can be reciprocate and moreover the rationality of treatment principle can also be adjudicated. Abstinence of alcohol¹⁰⁻¹² is itself a big remedy for alcoholic pancreatitis but despite of this confounder it can be assumed that the medicines have profound anti-inflammatory property. During the treatment, the patient neither developed any complications (e.g. Organ failure) nor showed any worsening of symptoms.

IV. CONCLUSION

Acute pancreatitis associated with mild ascites and bilateral pleural effusion is a complicated presentation with significant mortality and morbidity. It requires skill full management plan. Delay in assessing or mismanagement may have serious consequences. Management of such cases with the Ayurvedic medicines within time constrain and without any complications is encouraging that needs to be further evaluate on large number of subjects to bring some concrete conclusion and better treatment modality.

REFERENCES

[1] Cameron JL, Anderson RP, Zuidema GD: Pancreatic ascites: Surg Gynecol Obstet, 125328-332, 1967.
 [2] Cameron JL, Kieffer RS, Anderson WJ, et al. Internal pan- creatic fistulas: pancreatic ascites and pleural effusions. Ann Surg 1976;183:e1587-593.
 [3] Anderson WJ, Skinner DB, Zuidema GD, et al: Chronic pan- creatic pleural effusions. Surg Gynecol Obstet 197;137: e1827-830.
 [4] Lopez MJ. (2002): The changing incidence of acute pancreatitis in children: a singleinstitution perspective. J Pediatr, 140:622-624
 [5] Agarwal N, Pitchumoni CS, Sivaprasad AV (1990). Evaluating tests for acute pancreatitis. Am J Gastroenterol, 85: 356366.
 [6] Vagbhata (2007) Vidradhi-Vriddhi-Gulma Nidana In: Pt. Shastri Sadashiva Hari, editor. Ashtangahridaya with Sarvangasundara Commentary by Arunadatta and Ayurveda-rasayana Commentary by Hemadri. 1st edition, Varanasi: Chaukhamba Surbharti Publications, pp 510.
 [7] Vriddha Vagbhata (2007) Vidradhi-Vriddhi-Gulma Nidana. In: Jyotir Mitra, editor. Ashtanga Samgraha with Shashilekha Commentary by Indu. 1st edition. Varanasi: Chaukhamba Surbharti Publications, pp 398.

[8] Sushruta Sanhita, Edited with Susrutavimarsini Hindi commentary by Dr. Anant Ram Sharma, Chaukhambha Surbharati Prakashan, Varanasi, Sutrasthan 45/96, pp 366.
 [9] Murthy KR, editor. 1st ed. Varanasi: Krishnadas Academy; 1992. Vagbhata, *Astanga Hridayam, Chikitsa Sthan*16/29; pp 451. [Google Scholar]
 [10] Schenker S, Montalvo R. Alcohol and the pancreas. Recent Dev Alcohol, 1998; 14:41–65. [PubMed] [Google Scholar]
 [11] Ammann RW. The natural history of alcoholic chronic pancreatitis. Intern Med. 2001;40:368–375. [PubMed] [Google Scholar]
 [12] Strate T, Knoefel WT, Yekebas E, Izbicki JR. Chronic pancreatitis: etiology, pathogenesis, diagnosis, and treatment. Int J Colorectal Dis. 2003;18:97–106. [PubMed] [Google Scholar]

TABLE 1. Medicines given during treatment period of 7 days

S NO.	Intervention	Anupana
(a)	Combination of <i>Panchttikat ghrita guggulu</i> 2 table spoon, <i>Trikatu churna</i> 2gm, <i>kutaki churna</i> 2gm	Twice a day, with luke warm water
(b)	Combination of <i>Drakshavleha</i> 2gm, <i>Shankha Bhasma</i> 250 mg	Twice a day, with normal water
(c)	<i>Trivrit churna</i> 5gm	Bed time, with luke warm water

* gm- gram, *mg- milligram

TABLE 2. Investigation before and after 7 days of treatment

Investigation	Before treatment	After treatment
Serum amylase	118 U/L	68 U/L
Serum lipase	100 U/L	13 U/L
Serum glutamic oxaloacetic transaminase (SGOT)	70 IU/L	22.04 IU/L
Serum glutamic pyruvic transaminase (SGPT)	84 IU/L	31.18 IU/L
USG whole abdomen	Acute cholecystitis, Pancreatitis, sludge GB, mild ascites (image 3)	Right renal calculus and left renal few calculi (image 4)
CT abdomen	Acute pancreatitis, mild ascites and bilateral pleural effusion. CT severity index is 6 (moderately severe disease).	-

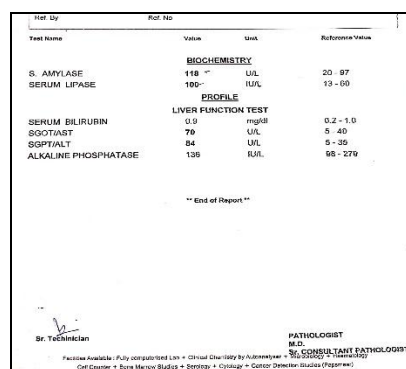


Image 1- Serum amylase and Lipase before treatment

Age/Sex Referred By	: 40 YRS / Male : JEEWAN HOSPITAL - I	Report Date Print Date	: 15/Jan/2019 05:27PM : 15/Jan/2019 05:27 PM
------------------------	--	---------------------------	---

CECT WHOLE ABDOMEN

The examination was conducted on a Dual Energy GSI Spectral CT scanner (CT750-HD) using low radiation dose algorithm. Serial axial sections were obtained from the domes of diaphragm till the pubic symphysis after bolus IV non-ionic contrast (Omnipaque) administration. Oral contrast was also administered for bowel opacification.

Clinical profile:- Pain abdomen

Generalized reduced liver parenchymal attenuation is noted, suggestive of diffuse fatty infiltration. There is no focal hepatic parenchymal lesion. The intrahepatic biliary radicles are not dilated.

Portal vein and CBD are normal in calibre.

Gall bladder shows normal wall thickness. There is no obvious radio-opaque calculus (the radiolucent calculi may not be detected in CT).

The pancreas shows diffuse mild enlargement, with haziness and stranding in the surrounding fat, suggestive of acute pancreatitis. There is no obvious focal area of necrosis in pancreatic parenchyma. No calcification is seen in pancreas. The MPD is not dilated. Small peripancreatic fluid collection is noted.

Spleen is normal in size and attenuation.

Both adrenals appear normal.

Both kidneys are normal in position and size. Few tiny cysts are noted in both kidneys. Small ill defined wedge shaped hypodense areas are also noted in renal parenchyma on both sides, suggestive of mild pyelonephritis. A calculus is seen in a lower polar calyx of right kidney, measuring 14mm (mean attenuation 1403HU) and another tiny calculus is also noted in its mid polar calyx. A small calculus, 3mm size, is also noted in a lower polar calyx of left kidney. No evidence of hydronephrosis / ureteric dilatation is seen on either side. Thickening of renal fascia and perinephric fat stranding are noted on both sides.

Image 2(a)- CT abdomen before treatment

Referred By	: Dr. AIA	Date	: 13-Mar-2019
Sample Collection Date/Time	: 13-Mar-2019	Approved Date	: 13-Mar-2019 05:16PM
Sample Receiving Date/Time	: 13-Mar-2019 04:49PM	Report Print Time	: 13-Mar-2019 09:16AM
Sample From	: AIA		

Test Description	Observed Value	Biological Reference Interval
Amylase, Serum*	66.00	25-125 SERUM
Enzymatic colometric assay		1-17- URINE U/L

Comments:
Amylase is an enzyme that helps digest carbohydrates. It is produced in the pancreas and the glands that make saliva. When the pancreas is diseased or inflamed, amylase is released into the blood. This test is used along with lipase to diagnose acute or chronic pancreatitis. In acute pancreatitis serum amylase is 4-6 times higher within 12-72 hours of pancreatic injury and returns to normal in a few days. In chronic pancreatitis amylase levels are initially moderately high. Increased levels seen in pancreatic duct obstruction and carcinoma of pancreas. Increased blood amylase with low urinary amylase indicates the presence of mucocystitis. Peritoneal fluid amylase raised in acute pancreatitis, intestinal obstruction or congenital defect.

Increased blood amylase levels may occur due to:

- Acute pancreatitis
- Cancer of the pancreas, ovaries, or lungs
- Cholecystitis
- Gallbladder attack caused by disease
- Gastroenteritis (stomach)
- Infection of the salivary glands (such as mumps) or a blockage
- Intestinal blockage
- Microcystidosis
- Pancreatic or bile duct blockage
- Perforated ulcer
- Tubal pregnancy (may have breast open)

Decreased amylase levels may occur due to:

- Cancer of the pancreas
- Damage to the pancreas
- Kidney disease
- Toxicosis of pregnancy

Image 3- Amylase after treatment

Age/Sex Referred By	: 40 YRS / Male : JEEWAN HOSPITAL - I	Report Date Print Date	: 15/Jan/2019 05:27PM : 15/Jan/2019 05:27 PM
------------------------	--	---------------------------	---

The duodenum shows circumferential wall thickening with its reduced distensibility. Wall thickening of gastric pylorus is also noted.

Urinary bladder appears normal.

Few tiny calcific foci are noted in prostate.

Mild ascites is seen.

There is no significant abdominal lymphadenopathy.

Mild bilateral pleural effusions are seen, right > left, with accompanying bilateral basal atelectasis.

OPINION: CT findings are suggestive of acute pancreatitis with small peripancreatic fluid collection, mild ascites and also mild bilateral pleural effusions. The modified CT severity index is 6 (moderately severe disease). Please correlate clinically.

Image 2(b)- CT abdomen before treatment

Sample Collection Date/Time	: 13-Mar-2019	Date	: 13-Mar-2019
Sample Receiving Date/Time	: 13-Mar-2019 04:49PM	Approved Date	: 13-Mar-2019 05:16PM
Sample From	: AIA	Report Print Time	: 13-Mar-2019 09:16AM

Test Description	Observed Value	Biological Reference Interval
Lipase	20.00	10-50 U/L

Comments:
Lipase is an enzyme that helps digest fats. It is produced in the pancreas and the glands that make saliva. When the pancreas is diseased or inflamed, lipase is released into the blood. This test is used along with amylase to diagnose acute or chronic pancreatitis. In acute pancreatitis serum lipase is 4-6 times higher within 12-72 hours of pancreatic injury and returns to normal in a few days. In chronic pancreatitis lipase levels are initially moderately high. Increased levels seen in pancreatic duct obstruction and carcinoma of pancreas. Increased blood lipase with low urinary lipase indicates the presence of mucocystitis. Peritoneal fluid lipase raised in acute pancreatitis, intestinal obstruction or congenital defect.

Increased blood lipase levels may occur due to:

- Acute pancreatitis
- Cancer of the pancreas, ovaries, or lungs
- Cholecystitis
- Gallbladder attack caused by disease
- Gastroenteritis (stomach)
- Infection of the salivary glands (such as mumps) or a blockage
- Intestinal blockage
- Microcystidosis
- Pancreatic or bile duct blockage
- Perforated ulcer
- Tubal pregnancy (may have breast open)

Decreased lipase levels may occur due to:

- Cancer of the pancreas
- Damage to the pancreas
- Kidney disease
- Toxicosis of pregnancy

Image 4- After treatment lipase

REPORT BY: A I A AGENCY: JEEWAN HOSPITAL

DATE: 15/01/2019 TIME: 05:27 PM

EXAMINATION: CECT WHOLE ABDOMEN

CLINICAL HISTORY: Pain abdomen

EXAMINATION FINDINGS: The examination was conducted on a Dual Energy GSI Spectral CT scanner (CT750-HD) using low radiation dose algorithm. Serial axial sections were obtained from the domes of diaphragm till the pubic symphysis after bolus IV non-ionic contrast (Omnipaque) administration. Oral contrast was also administered for bowel opacification.

Generalized reduced liver parenchymal attenuation is noted, suggestive of diffuse fatty infiltration. There is no focal hepatic parenchymal lesion. The intrahepatic biliary radicles are not dilated.

Portal vein and CBD are normal in calibre.

Gall bladder shows normal wall thickness. There is no obvious radio-opaque calculus (the radiolucent calculi may not be detected in CT).

The pancreas shows diffuse mild enlargement, with haziness and stranding in the surrounding fat, suggestive of acute pancreatitis. There is no obvious focal area of necrosis in pancreatic parenchyma. No calcification is seen in pancreas. The MPD is not dilated. Small peripancreatic fluid collection is noted.

Spleen is normal in size and attenuation.

Both adrenals appear normal.

Both kidneys are normal in position and size. Few tiny cysts are noted in both kidneys. Small ill defined wedge shaped hypodense areas are also noted in renal parenchyma on both sides, suggestive of mild pyelonephritis. A calculus is seen in a lower polar calyx of right kidney, measuring 14mm (mean attenuation 1403HU) and another tiny calculus is also noted in its mid polar calyx. A small calculus, 3mm size, is also noted in a lower polar calyx of left kidney. No evidence of hydronephrosis / ureteric dilatation is seen on either side. Thickening of renal fascia and perinephric fat stranding are noted on both sides.

Urinary bladder appears normal.

Few tiny calcific foci are noted in prostate.

Mild ascites is seen.

There is no significant abdominal lymphadenopathy.

Mild bilateral pleural effusions are seen, right > left, with accompanying bilateral basal atelectasis.

OPINION: CT findings are suggestive of acute pancreatitis with small peripancreatic fluid collection, mild ascites and also mild bilateral pleural effusions. The modified CT severity index is 6 (moderately severe disease). Please correlate clinically.

Image 5 – USG after treatment