

## Chronic Pancreatitis and its Ayurvedic Management in Child: A Case Study

Amit Kataria<sup>1</sup>, Sushmita Kimothi<sup>2\*</sup>

<sup>1</sup> Associate Professor, <sup>2</sup> MD Scholar, PG Department of Kaumarbhritya, Shri Krishna Government Ayurvedic Medical College and Hospital, Kurukshetra, Haryana, India.

### ABSTRACT:

Chronic Pancreatitis is chronic inflammatory and fibrotic disorder of pancreas including constant pain in epigastric region, nausea, vomiting and increase in serum amylase and lipase level three times the upper limit. It's further characterized by loss of exocrine and endocrine functions of pancreas. Despite advances in the medical science the prognosis of the disease is unclear. Incidences of chronic pancreatitis are 8.2 new cases per 100,000 every year and a prevalence of 26.4 cases. There is mortality rate of 30% in 10 years of age. It is primary life-threatening nutritional and metabolic condition of gastro intestinal system that becomes threat to child's growth and induces educational loss due to recurrent hospitalization. A case of chronic pancreatitis was diagnosed, patient experienced symptoms like epigastric pain, tenderness, anorexia, weight gain and irritability along with elevated serum lipase and serum amylase. Clinical and conceptual correlation was set between chronic pancreatitis and *Vaata Anubandha Kaphaj Ghrani*. It was treated by ayurvedic preparations like *Bilvadigutika*, *Chundaivattral Churan* and *Arogyavardhani Vati* along with the dietary changes for the time period of 4 months. It was seen that patient got relief in symptoms like excruciating pain, nausea, abdominal tenderness, anorexia, after 4 months of the treatment. When serum amylase was done, it was 707IU/L on 29/5/21 and was 25IU/L on 7/9/21.

**KEYWORDS:** Ayurveda, Chronic Pancreatitis, *Vaata Anubandha*, *Kaphaj Grahani*.

Received: 16.07.2022 Revised: 25.08.2022 Accepted: 21.11.2022 Published: 20.12.2022

### Quick Response code



### \*Corresponding Author:

**Dr. Sushmita Kimothi**

P.G. Scholar, PG Department of Kaumarbhritya, Shri Krishna Government Ayurvedic Medical College and Hospital, Kurukshetra, India.

E-mail : [sushmitacherry95@gmail.com](mailto:sushmitacherry95@gmail.com)

### INTRODUCTION:

Chronic pancreatitis is a diffused inflammatory process of pancreas involving head, body and tail resulting in permanent structural and functional damage to the

pancreas. [1] There is persistent progressive and irreversible damage of the pancreas due to chronic inflammation. [2] Chronic pancreatitis in children is often due to genetic mutations or due to congenital anomalies of

pancreatic or biliary ductal system.<sup>[3]</sup> However, the exact pathogenesis is not clear. The pain is aggravated by lying down and is relieved to some extent by sitting and stooping forward.<sup>[4]</sup> Chronic pancreatitis is common in warm climates, young age and there are high chances of having diabetes, stone in the duct of gall bladder and parenchymal calcification in the patient.<sup>[5]</sup> Mortality in chronic pancreatitis showed 10%. Endocrine part secretes insulin, glucagon, somatostatin pancreatic polypeptide, involved in homeostasis of blood glucose, control upper G.I.T motility and the exocrine part is responsible for the digestion of protein by trypsinogen, chymotrypsinogen and of fats by amylase and lipase.

Treatment of this entity is challenging due to its life-threatening nature, irreversible nature of illness and limitation of the therapy to painkillers, IV fluids, pancreatic enzymes. This disease is known to cause pancreatic cancer in up to 40% cases and uncontrolled diabetes in 70-90% of cases. There is need of the hour for research supportive effectiveness safe treatment. Pancreas is referred as *Agnashaya* in Ayurveda, *Agni* resides in *Grahani kala* vitiation of *Agni* causes *Grahani Dosha*. The prime site of *Agni* and site of occurrence of disease *Grahani Dosha* is organ *Grahani* <sup>(6)</sup> The present case of 8yrs old female patient belonging to middle class family presenting with the symptoms of excruciating pain can be compared to *Vata Anubandha Kaphaj Grahani*. Because of this excessive pain was seen in the abdomen, periumbilical region radiating towards back along with vitiation of *Samanvayu* (which aids in digestion and absorption in association with *Pachaka Pitta*) Because of which it is difficult to carry digestive and metabolic processes comprehensively. Other symptoms like anorexia, nausea, vomiting stiffness and

heaviness in the abdomen along with increased lethargy were seen so it can be compared with *Kaphaj-Grahani*. Therefore, this case study was carried to study the beneficial effect of *Vata Shamak* and *Kapaha Shamak* medicine.

#### **CASE DESCRIPTION:**

Initially on 31-05-2018, a 5-year-old female child with no family history of pancreatitis presented with the complaint of pain in abdomen in epigastric and periumbilical region, radiating towards back, severe in intensity. Along with episodes of non-projectile, non-bilious vomiting. She was immediately admitted to Hospital for 9 days and treated thereafter with antibiotics and analgesics. She was diagnosed peritonitis with Ascites and CECT findings were suggestive of Colitis. Sr. Amylase and Sr. Lipase were elevated to 619 and 167.17. No organomegaly, no necrosis was seen.

On 04-06-2018 CT abdomen suggested bulky distal body of the pancreas. After 9 days patient became asymptomatic and was discharged.

After 2 months (25-08-2018) patient had relapsing pain and admitted to hospital. Sr. Amylase was 198 and lipase were 871IU/L. US showed multiple dilated fluid filled gut loops. Got relief on symptomatic treatment.

After 4 months patient has pain in epigastrium (bending and kneeling) admitted to same hospital. Sr. Amylase and Sr. Lipase were noted to be 3450 and 2460. US showed mild ascites and bulky pancreas. Lipid profile was done. HDL found out to be (41.5gm/DL -HIGH RISK) and LDL (107.9-MED RISK). She was admitted for 8 days symptoms relieved so as the pain.

On 06-05-2021 patient came to the OPD of Shri Krishna Govt. Ayurvedic College with complaint of abdominal pain radiating to back

along with nausea. Weight of the patient recorded was 37.67 kg. On general examination patient was afebrile there was no icterus, clubbing edema and lymphadenopathy.

#### THERPEUTIC INTERVENTION:

Patient was given treatment and *Bilvadigutika* 1-1-1 with buttermilk, *Arogyavardhini Vati*

twice a day after meals, [7-8] along with *Chundaivattral Churna* 4gm BD with buttermilk.

Ayurvedic treatment aimed to gradually restore metabolism by harmonizing state of *Jatharagni*. Patient was given a diet plan comprising of three meals and snacks. Low calorie diet was prescribed along with a diet plan that included.

**Table-1: Clinical Symptoms:**

Symptoms	Severity	Duration
Episodes of pain in epigastric region with nausea and vomiting after taking fatty meals	Once in fortnight	3 years
Tenderness present	3+	3 years
Anorexia	2+	3 years
Irritable	3+	3 years

**Table-2: Diet pattern:**

Meal	Items
8:00 Am (Breakfast)	Daliya, seasonal fruit
11:00 Am (Mid Lunch)	Multigrain bread, <i>Takra</i> , Paneer sandwich
1:00 Pm (Mid Lunch)	Rice, pulse (Arhar, Moong, Masoor), vegetable, curd
5:00 Pm (Snack)	Flat rice namkeen, kale chane, Paneer
7:30 Pm (Dinner)	Multigrain roti + Daal
9:45 PM	Milk/vegetable/Custurd

**Table-3: Prescribed medications:**

Aushadh	Dose	Anupana	Duration
<i>Bilvadi Gutika</i>	250 mg	<i>Takra</i>	8 months
<i>Arogyavardhini Vati</i>	250 mg	<i>Adraka</i>	8 months
<i>Chundaivattral Churna</i>	2 gm BD	<i>Takra</i>	8 months

**Table-4: Detail of investigations during treatment:**

Date	Investigation	Value
18 Feb 2021	Sr. Amylase	689 IU/L
	Sr. lipase	877 IU/L
29 May 2021	Sr. Amylase	707 U/L
	Sr. lipase	800 IU/L

## INTERNATIONAL JOURNAL OF AYUSH CASE REPORTS (IJA-CARE)

	Random Glucose	88 mg/dl
02 June 2021	Sr. Lipase	25.1 IU/L
18 July 2021	Sr. Amylase	28.2 IU/L
	Sr. Lipase	18.6 IU/L
2 June 2021	Sr. Lipase	25.1 IU/L
7 Sep 2021	Sr. Amylase	25 IU/L
	Blood sugar (R)	92 mg/dl
19 Oct 2021	USG	Borderline hepato- splenomegaly. Non-specific mesenteric lymph node
14 Nov 2021	HbA1c	5.8 %
	Avg. Glucose	120 mg/dl
	Sr. Amylase	72 U/L

**Table-5: Results**

Symptoms	Severity before treatment	Severity after 4 months	Severity after 8 months
Episodes of pain in epigastric region with nausea and vomiting after taking fatty meals	Once in fortnight	Once in 45 days (Mild pain)	No pain seen
Tenderness present	3+	1+	Absent
Anorexia	2+	1+	absent
Irritable	3+	1+	Not irritable

### Ultrasound Upper Abdomen

**INDICATION:**

Alleged F/U/C Cholelithiasis; Epigastric region pain and fullness since two days.

**FINDINGS:**

Liver is normal in size, outline, echotexture and echogenicity. No focal lesions seen. IHBRs are not dilated. Portal vein is normal in caliber at porta.

Gall Bladder is seen in partially distended state and *shows minimal dependent sludge within the lumen*. Wall thickness normal. Lumen is clear. No pericholecystic edema or inflammation seen. CBD is not dilated.

Pancreas is partially obscured by gases however *is mildly bulky in size in the body and tail region*, altered in shape and echotexture with a fuzzy outline. *Minimal peripancreatic inflammation is seen with the inflammatory fluid extending along the splenorenal space*. Pancreatic duct is not dilated.

Spleen is normal in size, shape and echotexture. No focal lesions seen.

Right kidney is normal in size, shape and echotexture. Pelvicalyceal system is normal. *Two concretions are seen of size 3.4 mm in the middle and 3.2 mm in the superior pole calyces*. Left kidney is normal in size, shape and echotexture. Pelvicalyceal system is normal. *A concretion of size 3.6 mm is seen in the inferior pole calyx*.

*Few discrete subcentimetric mesenteric and right parailiac lymph nodes are seen largest measuring upto 6.2 mm in short axis dimension*. No necrosis or calcification seen within. *Mild diffuse mural thickening is seen involving the splenic flexure*. Rest of the visualized bowel loops are normal. No abnormal dilatation or wall thickening seen. *Minimal to mild amount of free fluid is seen in the peritoneal space*.

**IMPRESSION:**

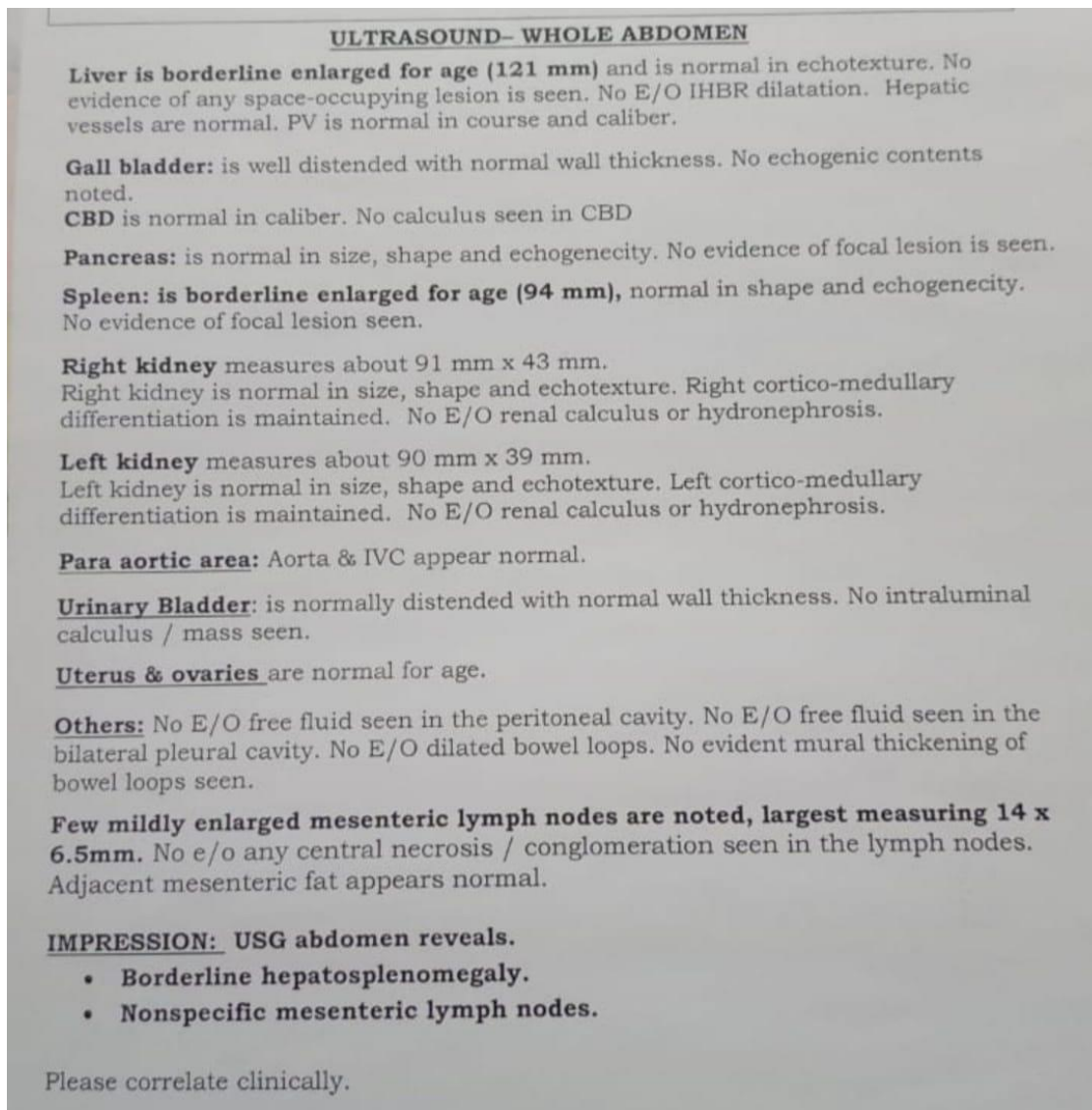
**Bulky heterogenous Pancreas (predominantly in the body and tail region) with minimal peripancreatic inflammation extending along splenorenal space, gall bladder Sludge and minimal to mild Ascites as described. Rule out subacute/acute on chronic Pancreatitis and its sequelae.**

**RECOMMENDATION:**

Suggested clinical correlation and MRCP for further evaluation.

**Fig-1: USG before Treatment**





**Fig-2: USG after Treatment**

#### RESULT:

From the above findings it's evident that the patient got relief in the symptoms that is pain in abdomen, tenderness, anorexia and irritability. Serum lipase and serum amylase also showed marked reduction. Along with marked improvement in the USG that showed bulky heterogeneous Pancreas on 29/05/21 and pancreas normal in size and shape on 19/10/21.

#### DISCUSSION:

Chronic pancreatitis leads to irreversible changes in the structure of pancreas. The disease and complications increase with increase in time. Limitation of traditional therapy, high cost for surgical approach, resistance to antibiotics makes it worst. So, to exclude all this a supportively effective treatment was started. This case is compared to *Vata-Anubandha Kaphaj Grahani*. Main cause of occurrence of this was static imbalance between *Kapha* and *Vata Dosha*, the

altered movement of intestinal and pancreatic juices can be understood due to vitiation of *Vata Dosha*.

*Bilva* possesses *Vata-Kaphahar* properties, provides relief in inflammatory conditions, is analgesic, digestive and anti-emetic relieving from flatulence and indigestion. [9] *Arogyavardhini Vati* clears channels for nutrients by removing toxins and improves digestion due to *Kapha-Vata Shamak* propogation, also shows *Yakrit-Uttejak* effect. Thus both *Bilvadi Vati* and *Arogyavardhini Vati* balances *Vata* and *Kapaha Dosha* and helps to break the *samprapti* of the disease. *Arogyavardhini vati* contains "*Tamra*" which has potent anti-inflammatory activities. [10] When more *Pachak Pitta* accumulate in duodenum, then it induces *Sopha* of *Agnasaya*, due to *Vidihai Guna* (corrosive nature of *pitta*). *Chundaivattral churna* was used as it contains *Amra* that possess pancreato-protective action along with usage in gaseous distention of abdomen, blotting and indigestion. It increases digestive fire, [11] and is also a mild laxative. [12] Another content *Brahthi* as absorbent property and is used in malabsorption syndrome. *Ajmoda* relieves indigestion, flatulence. [13] *Methika* is helpful in digestion and anorexia and acts as analgesic. [14] As a whole this drug helps in digestion of oily food item which relieved the flatulence and abdominal distention in the patient thus by subsiding the painful episodes. Hence the treatment modality was carried successfully in this case and can further be used in the cases of Chronic Pancreatitis.

#### CONCLUSION:

A single case study shows that Ayurvedic medications along with dietary modifications are effective in the management of chronic pancreatitis.

#### LIMITATION OF STUDY:

This is a single study so need to be tried this protocol in more number of patients for concrete conclusion.

#### CONSENT OF PATIENT:

Informed written consent has been taken from the patient for procedure as well as for publication of the reports without disclosing the identity of a patient.

#### REFERENCES:

- 1 K. Rajgopal Shenoy, Anitha Nileshtar, Manipal Manual of Surgery, Gallbladder and Pancreas, CBS Publishers, New Delhi, 3<sup>rd</sup> Edition, P-492.
- 2 M Sriram Bhat, SRB's Manuel of Surgery, The Pancreas, Jaypee Brothers Medical Publishers, Daryaganj Delhi, 5<sup>th</sup> Edition, P-692.
- 3 Kliegman, St. Geme, Blum, Shah, Tasker, Wilson, Nelsons Textbook of Pediatrics, The Digestive System, Elsevier Publishers, 21<sup>st</sup> Edition, P-2078.
- 4 S. Das, A Concise Textbook of Surgery, The Pancreas, S. Das Publication, Calcutta, 11<sup>th</sup> edition, P-933
- 5 K. Rajgopal Shenoy, Anitha Nileshtar, Manipal Manual of Surgery, Gallbladder and Pancreas, CBS Publishers, New Delhi, 3<sup>rd</sup> Edition, P-492.
- 6 Shastri K, Chaturvedi G., Charak Samhita, chikitsa Sthana Grahani Dosha Chikitsa Adhyaya 15/42, Chaukhamba Bharti Academy, Varanasi, 2013, P-462.
- 7 Tripathi B, Astanga Hriday, Uttara tantra 36/84-85 Chaukhamba Sanskrit Prakashan, Delhi, Edition 2014, P-436.
- 8 Shastri AD. Ras Ratna Sammuchay, chapter no 20/87, 9<sup>th</sup> edition,

- Chaukhamba Sanskrit Publishers, Varanasi, 1994, P-400.
- 9 Anupama K, Tiwari RC, Sharma VB, Tiwari S. Bilwa (Aegle marmelos)- A Review Article. International Ayurvedic Medical Journal 2020;8(2): 2792-2796.
- 10 Bafna S. Piyush, Patil D. Savita, Physicochemical characterization and anti- inflammatory activity of ayurvedic herbo metallic tamra bhasma in acute and chronic models of inflammation. Taylor and Francis Online. 2018;33(10) 681-688.
- 11 Tripathi I. Rajnighantu, Amrati Varga, Chowkhambha Krishandas Academy, Varanasi, 6<sup>th</sup> Edition, 2016, P-340.
- 12 Ojha JK. A Handbook of Dravyaguna, Vanaspatik Dravya, Chaukhamba Sanskrit Pratishthan, 2<sup>nd</sup> Edition, P-14.
- 13 Roper R, Pathak DP, Gupta V, Kapoor UG, Bhutani R, Kant R. Apium graveoleons-A health boon. International journal of Pharmaceutical Sciences Review and Research. 2017; 46(1):95-99
- 14 Ritika, Trigonella foenum-graecum L: A Review of its ethnobotany, pharmacology and Phytochemistry. International Journal of Advance Research in science and engineering.2016;5(9):192-204.

**CONFLICT OF INTEREST:** Author declares that there is no conflict of interest.

**GUARANTOR:** Corresponding author is guarantor of this article and its contents.

**SOURCE OF SUPPORT:** None

**HOW TO CITE THIS ARTICLE:**

Kataria A, Kimothi S. Chronic Pancreatitis and its Ayurvedic Management in Child: A case study. Int. J. AYUSH CaRe. 2022; 6(4):334-341.