

## “Early Minimal Change Chronic Pancreatitis” Or “Imaging Negative Chronic Pancreatitis”

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**Abstract:** We report five cases of early or minimal change pancreatitis in our outpatient department. “Minimal Change Pancreatitis” is an entity that is very unfamiliar in majority of the practicing physician & surgeons. It is often called as “early chronic pancreatitis”. All these terms are often used synonymously. It is a syndrome consisting of early phase of inflammation of pancreas which is manifested by less easily identifiable clinical features like chronic or recurrent abdominal pain syndrome with normal abdominal imaging studies e.g. USG (Ultrasonography), CT (Computed Tomography), MRI (Magnetic Resonance Imaging)/MRCP (Magnetic Resonance Cholangio Pancreatography).

**Keywords:** Early Minimal Change Chronic Pancreatitis, Imaging Negative Chronic Pancreatitis, Minimal Change Pancreatitis, Early Chronic Pancreatitis.

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### I. Introduction

Early Minimal Change Chronic Pancreatitis is often called as “Early chronic pancreatitis”. It is a syndrome consisting of early phase of inflammation of pancreas which is manifested by less easily identifiable clinical features ranging from chronic abdominal pain to steatorrhea with normal USG, CT, MRI / MRCP<sup>1, 2, 3</sup>. Other symptoms such as dyspepsia, nausea, vomiting and weight loss may be present. Often the patients are non-alcoholic. The pathophysiology of this syndrome is not well known but is mostly related to subclinical inflammation at cellular level and raised intraductal pressure. However there is subtle rise in pancreatic amylase or lipase often along with abdominal pain. Imagings by USG, CT/MRI or MRCP are often non-conclusive. Such cases can only be diagnosed as minimal change chronic pancreatitis or early minimal chronic pancreatitis by secretin stimulated MRCP, endoscopic ultrasound (EUS) or cholecystokinin-stimulated endoscopic pancreatic function test (ePFT)<sup>4, 5</sup>. Although MRCP and Endoscopic ultrasound are now a day's routinely used for diagnosing imaging negative chronic pancreatitis in developed countries, there are many unanswered questions regarding the specificity, high inter-observer variability, and cost-effectiveness ratio of these tests.

### II. Case History

All five patients in our study were seen in outpatient department. Four patients presented with typical recurrent episodes of epigastric abdominal pain while one patient had history of frequent loose stools. Epigastric abdominal pain was radiating to back and was aggravated on taking meals. There was no history of addiction such as alcohol or smoking. There was no significant family history or history of any drug abuse. All of them showed subtle rise in the serum amylase and lipase levels. Fasting triglyceride levels were not more than 250 mg/dl. Serum calcium levels, blood sugar levels and thyroid function tests were within normal limit. ESR (Erythrocyte Sedimentation Rate) and CRP (C - reactive protein) were within normal range. Liver and renal function tests were normal in all five patients. All patients showed normal imaging study. Workup for Autoimmune Pancreatitis was negative in all five cases. Gastroduodenoscopy was normal in all five cases. These five cases were treated conservatively by pancreatic supplement and had dramatic relief in symptoms and signs.

### III. Discussion

In a developing country like India the newer diagnostic modalities such as MRCP, Endoscopic Ultrasound, MRI with gadolinium contrast are available only in limited corporate and tertiary care centers and majority of population is not affording for such specialised investigations, the likelihood of missing a case of early minimal chronic pancreatitis which is not uncommon chronic abdominal pain syndrome in practice, is very high. Detection of minimal chronic pancreatitis is difficult by ultrasound because ultrasound is operator (radiologist) dependant and patient factors also interfere in diagnosis e.g. obesity or abdominal gas interfering pancreatic visualisation. Also ultrasound has low sensitivity in detecting pancreatic calcification. In such cases, Endoscopic ultrasound is superior to traditional ultrasound because it uses high frequency probe and it is non-invasive. Endoscopic ultrasound (EUS) is also superior to ERCP (Endoscopic Retrograde Cholangio Pancreatography), because it detects ductal alteration and parenchymal alteration early in minimal early chronic

pancreatitis<sup>6</sup>. But in a developing country like India, peoples have limited access to such investigations. Therefore, in such constraint situation directly managing this condition will be more beneficial as management of this syndrome is purely conservative.

#### **IV. Conclusion**

With the prompt recognition of chronic abdominal pain syndrome or steatorrhoea with normal radiological studies and no other distinguishing features of pancreatitis, the possibility of early minimal chronic pancreatitis or minimal changes chronic pancreatitis should be borne in mind as management of this syndrome is fully conservative, simple and relieving to the patient; also further complication can be averted with prompt recognition, diagnosis and Treatment. Hence the importance of recognition of less commonly known condition called early minimal chronic pancreatitis or minimal changes chronic pancreatitis or radiologically negative chronic pancreatitis is important. Hence, the Physicians and Surgeons in developing country should be aware of the symptomatology of “Early Minimal Change Chronic Pancreatitis” or “Imaging Negative Chronic Pancreatitis” because treatment is conservative, very simple and relieving to the patients.

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