

# Elevated Serum Amylase and Lipase in Inflammatory Bowel Disease

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## Abstract

An elevated serum level of Amylase along with Lipase is usually a marker for pancreatic injury. [1,7] Isolated elevations of serum Amylase can occur in a host of other conditions but when accompanied with elevated serum Lipase levels, makes the diagnosis of pancreatitis more likely.[1,7] However, a moderate percentage of patients with Inflammatory Bowel Disease (IBD) have asymptomatic elevations of both these enzymes in their sera despite the absence of pancreatic inflammation .[2] The dilemma facing the physician is whether or not these patients need to be treated for pancreatitis when they present with abdominal symptoms. We discuss the case of a 45 year old white male with Ulcerative Colitis who had elevated serum levels of Amylase and Lipase.

## CASE REPORT

The patient was a 45 year old white male diagnosed with Ulcerative Colitis about 10 yrs ago. He had been through several remissions and relapses and his symptoms were reasonably controlled with Asacol 800mg Per oral Tid. He presented to the hospital emergency room on a weekend with complaints of bloody diarrhea since two days.

His symptoms were associated with mild cramping pain in the left lower quadrant of his abdomen. He denied nausea or vomiting and was tolerating oral diets well. On examination, he was not febrile and his vital signs were stable. His chest was clear on auscultation and there were no cardiac murmurs. His abdomen was not distended, bowel sounds were heard and there was minimal tenderness over the left inguinal and hypogastric regions, with no rebound tenderness or rigidity. There was no blood on digital rectal examination. His complete blood count revealed a mild microcytic anemia and a normal white cell count. His basic metabolic panel including serum calcium was within normal limits. His serum levels of Amylase and Lipase were found to be elevated at 125 units/liter (Normal = 35 to 110 U/L) and 390 units/liter (Normal = 25 to 300U/L) respectively. His liver function tests and serum lactate dehydrogenase were within normal limits. His abdominal film revealed a normal bowel gas pattern with no evidence of infarction or obstruction. His intra abdominal organs were within normal limits as best visualized by an abdominal ultrasound . A

computerized tomogram (CT) scan showed no evidence of pancreatitis. It was concluded that elevated serum levels of Amylase and Lipase were secondary to his underlying IBD. He was diagnosed to have a relapse of Ulcerative Colitis and was started on Prednisone 40 mg Per Oral Bid. The patient went into remission and was tapered off the steroid over a period of six weeks.

## DISCUSSION

Elevated serum levels of Amylase along with Lipase are usually markers of pancreatitis. Table 1 [1,7,8,9,10,11,12,13,14,15]. However these enzymes are elevated in up to 14% of patients with IBD. [2]

Our patient presented with symptoms which were not typical of pancreatitis. The postulated reason for such an increase of serum Lipase/Amylase in IBD patients is an extra-pancreatic release of these enzymes from the inflamed bowel. Another reason described for the same is intestinal reabsorption of the released Amylase/Lipase. [2] Interestingly these elevations are found to correlate with the extent and activity of the bowel inflammation. [2,4] It may be noted that elevated serum levels of Lipase have often been found in critically ill patients without definite radiological evidence of pancreatitis. [6]

It however needs to be remembered that pancreatitis can be a rare extra-intestinal manifestation of IBD, secondary to duodenal fistulas, ampullary or primary pancreatic Crohn's

Disease, gallstones, Primary Sclerosing Cholangitis or even drugs such as Mercaptopurine and Azathioprine. [3,5]

We favor the opinion that in patients with IBD, the decision to initiate a treatment for pancreatitis should not be based on the serum markers alone and the clinical presentation and examination should be encompassed in the decision making. In those presenting with atypical symptoms a specific treatment for pancreatitis is not indicated and therapy should be guided by the requirements of the IBD therapy. [2]

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