



# Sertraline-Induced Lipase-Sparing Acute Interstitial Edematous Pancreatitis: A Case Report

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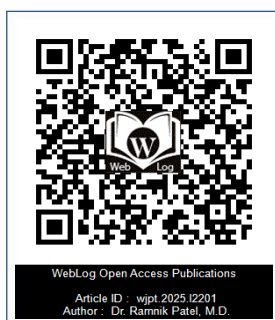
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## Abstract

Sertraline, a selective serotonin reuptake inhibitor (SSRI), has been associated with rare cases of acute pancreatitis. We report a case of sertraline-induced, lipase-sparing acute interstitial edematous pancreatitis in a young professional, initially misdiagnosed as acute cholecystitis. On rechallenge, the patient developed recurrent symptoms with elevated inflammatory markers but normal ultrasound findings. Contrast-enhanced computed tomography confirmed acute interstitial edematous pancreatitis with associated venous thrombosis. Withdrawal of sertraline and substitution with an alternative antidepressant led to complete resolution. This case highlights the diagnostic challenge of lipase-sparing pancreatitis and underscores the importance of considering drug-induced etiologies.

**Keywords:** Acute Pancreatitis; Antidepressant; Cholecystitis; Drug-Induced; Lipase; Sertraline; Ssris; Adverse Effects

## Introduction

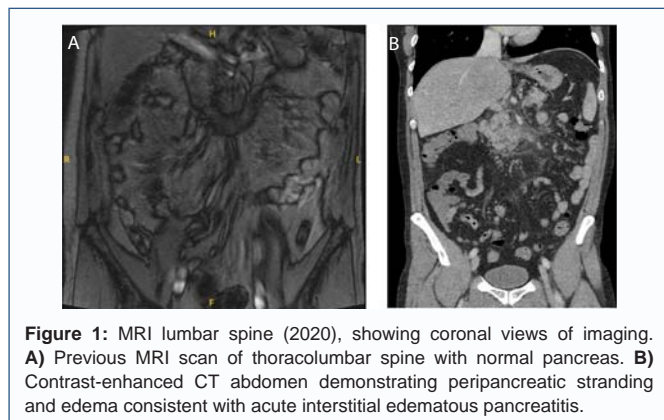
Acute interstitial edematous pancreatitis is a form of acute pancreatitis characterized by inflammation and swelling of the pancreas. It is a severe condition with potential complications. We have seen a fulminating and potential life-threatening paracetamol induced hepatorenal failure in a patient with inadvertent staggered overdose of paracetamol [1]. Sertraline is a selective serotonin reuptake inhibitor (SSRI) used to treat anxiety, depression and other conditions. While generally safe, rare cases of acute pancreatitis have been reported in patients taking sertraline [2-3]. Acute pancreatitis is a potentially severe condition, most commonly caused by gallstones and alcohol. Drug-induced pancreatitis accounts for fewer than 3% of cases but is increasingly recognized [4-5]. We present such a recognized and rare case of sertraline-induced, lipase-sparing acute interstitial edematous pancreatitis, recently managed by us emphasizing diagnostic pitfalls and clinical management.

## Case Report

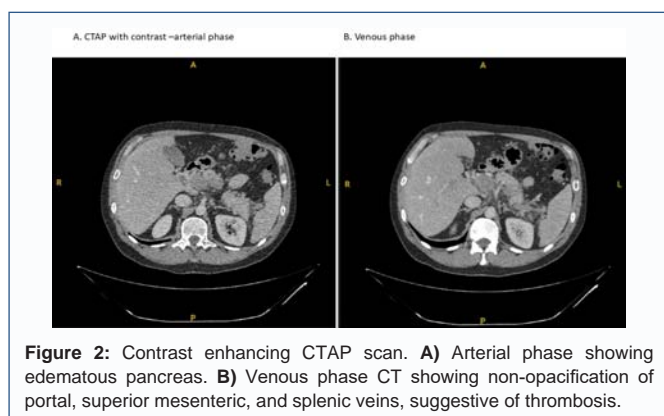
A 44-year-old male information technology engineer and university lecturer developed anxiety and mild depression following relocation. His general practitioner prescribed sertraline, his only medication. Past history was uneventful apart from lumbar back pain for which he has undergone a magnetic resonance imaging (MRI) scan of the lumbar spine and treated conservatively in 2020 (Figure 1A).

**First episode:** Shortly after initiation, he experienced right upper abdominal pain radiating to the back, fever, anorexia, nausea, and vomiting. The patient never had any alcohol consumption. Examination revealed right upper quadrant tenderness. He discontinued sertraline without medical advice. Gallstones/cholecystitis was suspected, antibiotics were started, and ultrasound was performed.

Complete blood count was normal except Monocytes  $1.25 \times 10^9/L$  (Normal 0.2 - 1.0). Liver functions and renal functions were normal. C-Reactive Protein 177 mg/L, Lipase 30 U/L (reference 8-78). *Helicobacter pylori* Antibody Negative, tTG absent, (IGA) 2.1 CU and Total IgA 2.79 g/L, and



**Figure 1:** MRI lumbar spine (2020), showing coronal views of imaging. **A)** Previous MRI scan of thoracolumbar spine with normal pancreas. **B)** Contrast-enhanced CT abdomen demonstrating peripancreatic stranding and edema consistent with acute interstitial edematous pancreatitis.



**Figure 2:** Contrast enhancing CTAP scan. **A)** Arterial phase showing edematous pancreas. **B)** Venous phase CT showing non-opacification of portal, superior mesenteric, and splenic veins, suggestive of thrombosis.

Fecal Calprotectin (FCP) was normal. The abdominal ultrasound was normal with no gall stones and normal gall bladder wall and pancreas could not be visualized due to gaseous distention of bowel loops. Repeat bloods after one week of antibiotics showed slow reduction of CRP to 129 mg/L and symptoms eased.

**Second episode:** On restarting sertraline, symptoms recurred more severely. Patient then started sertraline medication again and developed the same symptoms and signs in more severe degree and general practitioner referred the patient to us for further evaluation. Repeat blood tests showed White Cell Count  $11.77 \times 10^9/L$ , Neutrophils  $8.57 \times 10^9/L$ , Monocytes  $1.68 \times 10^9/L$ , Platelet Count  $472 \times 10^9/L$ , C-Reactive Protein 143 mg/L, and Lipase 21 U/L (8 – 78).

**CT abdomen/pelvis:** Demonstrated peripancreatic stranding and edema consistent with acute interstitial edematous pancreatitis (Figure 1B). Venous phase imaging revealed non-opacification of the portal, superior mesenteric, and splenic veins, suggestive of thrombosis (Figure 2).

Sertraline was discontinued, supportive care provided, and the patient recovered fully. The general practitioner switched him to appropriate medication. At three-month follow-up, he remained asymptomatic, with normal blood tests and Doppler ultrasound confirming venous recanalization.

## Discussion

Drug-induced pancreatitis, though rare, is an important differential diagnosis when gallstones and alcohol are excluded [4-5]. SSRIs, including sertraline, have been implicated in pancreatitis.

Diagnostic challenge in our case was due to lipase levels were normal, complicating recognition. Ultrasound was non-diagnostic; CT imaging confirmed pancreatitis. Venous thrombosis was an additional complication, resolved after drug withdrawal.

Most drug-induced pancreatitis cases are mild to moderate, but severe and potentially fatal presentations can occur. Discontinuation of the offending drug is essential, with supportive care including hydration, analgesia, and monitoring.

Acute pancreatitis is most commonly caused by gallstones and alcohol. Drug-induced pancreatitis accounts for <3% of cases but is increasingly recognized. SSRIs, including sertraline, have rarely been implicated in pancreatitis, usually with elevated lipase/amylase levels. This case highlights a rare presentation of sertraline-induced, lipase-sparing acute interstitial edematous pancreatitis, complicating diagnosis. It demonstrates that normal lipase levels do not exclude pancreatitis, especially in drug-induced cases. Imaging (contrast-enhanced CT) was crucial for diagnosis when ultrasound and biochemical markers were inconclusive. Prompt discontinuation of sertraline and supportive care led to full recovery, underscoring the importance of clinician awareness of this rare but serious adverse effect.

The commonest causes of acute pancreatitis are gallstones and alcohol abuse and must be ruled out first. Drug-induced pancreatitis, accounting for less than 3% of the acute pancreatitis, has become increasingly recognized as an additional and vitally important etiology of acute pancreatitis [4-5].

Sertraline is a selective serotonin reuptake inhibitor (SSRI) class antidepressant that has a range of side effects even when used at the recommended dose and has been associated with overdose cases. SSRIs may precipitate an acute pancreatitis in susceptible individuals. Patients taking SSRIs should be suspected and assessed for pancreatitis if they report abdominal pain of unknown origin [6].

This case report describes a rare and diagnostically challenging presentation of sertraline-induced acute pancreatitis in a young professional. The novelty lies in the lipase-sparing nature of the condition, which initially mimicked acute cholecystitis and delayed recognition. Contrast-enhanced CT imaging ultimately confirmed the diagnosis, and withdrawal of sertraline led to complete recovery. This case is important as drug-induced pancreatitis accounts for fewer than 3% of cases, yet awareness is crucial for timely diagnosis. SSRIs are widely prescribed, and clinicians may overlook their potential to precipitate pancreatitis. Lipase-sparing presentations are particularly deceptive, underscoring the need for imaging when biochemical markers are inconclusive.

Interstitial oedematous pancreatitis is one of the minor form of two subtypes of acute pancreatitis. It is normally termed as an uncomplicated *pancreatitis* or an *acute pancreatitis* in daily use. The other type of acute pancreatitis is called acute necrotising pancreatitis [7]. SSRIs are the fundamental tools of pharmacotherapy for adults with anxiety and depressive disorders. They help resolve symptoms and restore function for most patients effectively; however, they have a their unique adverse effect profile, and their tolerability may complicate treatment or lead to discontinuation [8]. This association of sertraline and pancreatitis is more likely to be considered when other common causes of pancreatitis, such as gallstones/biliary colic/ cholecystitis or alcohol abuse, are ruled out.

In most cases, raised amylase and lipase levels in the blood tests are indicative of acute pancreatitis. However, our case was an exception to the rule and lipase sparing effect made it more difficult to diagnose during first episode. Imaging, such as ultrasound is not effective as shown in our case and CT scans or MRI, may demonstrate acute interstitial edematous pancreatitis, pancreatic swelling and inflammation.

Most of the drug-induced pancreatitis cases are usually mild to moderate in severity, but severe fulminating and even potentially fatal cases can occur. Discontinuation of sertraline is crucial step and switching to appropriate medication is generally adequate. Supportive care, including pain management and hydration, is typically provided. In severe fulminating cases, or sertraline overdose, hospitalization and inpatient treatment may be necessary [9]. An overdose of sertraline has also been linked to pancreatitis in some cases.

## Conclusion

Sertraline-induced acute pancreatitis, though rare, should be considered in patients presenting with unexplained abdominal pain after SSRI initiation. Lipase-sparing presentations may delay diagnosis, underscoring the importance of imaging. Prompt drug withdrawal and supportive management are usually sufficient for recovery. With the increasing use of antidepressants in young age patients, our case serves as a useful timely reminder that clinicians should be aware of the association between sertraline, and the development of acute pancreatitis. We believe this case will be of interest to clinicians, general practitioners, and researchers, as it highlights an uncommon but clinically significant adverse effect of a widely used antidepressant.

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