

## Abstract

**Introduction:** Escitalopram is an FDA-approved SSRI used to treat major depressive disorder and generalized anxiety disorder. Drug-induced pancreatitis accounts for upto 5% of all cases of acute pancreatitis so we aimed to investigate the association between escitalopram exposure and a rare complication of escitalopram exposure which is acute pancreatitis. Escitalopram can be associated with increased risk of acute pancreatitis at the beginning of treatment.

• We present a rare case of **escitalopram** exposure leading to acute pancreatitis and discuss the risk of this adverse outcome in clinical practice and it's management.

**Case Report:** A 65 year old patient with major depressive disorder & generalized anxiety disorder acquired acute pancreatitis 3 months after starting **escitalopram**. We performed a literature review of common databases including: Cochrane, PubMed, Embase, Clinical Key, Medline, Web of Science.

• Search Terms: ; Escitalopram induced pancreatitis, Lexapro induced Pancreatitis, Escitalopram and Pancreatitis, Acute Pancreatitis and Escitalopram, Lexapro and acute Pancreatitis, SSRI use and Pancreatitis.

**Conclusion:** Through this case discussion and review of current literature, we present information on the possible mechanism by which **escitalopram** can lead to acute pancreatitis. The literature supports a strong positive correlation between **escitalopram** causing acute pancreatitis. We alert clinicians to be aware of signs and symptoms and provide treatment recommendations for **escitalopram** induced pancreatitis.

## Case Presentation

- 65-year-old male presented to the ED with worsening epigastric pain, nausea, vomiting for last 2 days; patient has past psychiatric history of major depressive disorder and generalized anxiety disorder for which he is currently on escitalopram 20 mg once daily. He had no family history of pancreatitis or pancreatic cancer, denied drinking alcohol, denied having any history of gall stones. His diagnostic evaluation revealed serum lipase of 257 U/L, Abdomen CT chest scan suggesting acute pancreatitis, ultrasound showed absence of gallstones, biliary sludge or CBD dilation, normal serum glucose, calcium and triglyceride levels
- Escitalopram was added to the medication regimen 3 months prior to admission and dosage was just increased from 10 MG to 20 MG 2 weeks prior to admission. Patient developed acute pancreatitis and there was suspicion that escitalopram may have been the unusual culprit. During his admission, a psychiatry consult was placed to evaluate the patient for escitalopram induced pancreatitis. Escitalopram was discontinued & switched to mirtazapine with complete resolution of symptoms in 4 days with serum lipase correcting from 257 to 39.

## Background

- Escitalopram** is a SSRI medication which is FDA-approved for treating major depressive disorder and generalized anxiety disorder. A significant proportion of escitalopram use remains off-label including panic disorder, ocd, ptsd, social anxiety disorder and pmdd. Drug-induced pancreatitis accounts for 3-5% of all cases of acute pancreatitis and over 12% of US adolescents and adults use antidepressants.
- With increasing diagnosis and treatment of psychiatric disorders, there is an increase in the use of medications to treat these disorders, thus an increase in related adverse drug reactions. **Escitalopram** can be associated with increased risk of pancreatitis at the beginning of treatment. Drug reactions in the pancreas may have serious consequences and can even be lethal if the patient continues to take the medication.

## Conclusion

- After **escitalopram** treatment, the patient complained of worsening Epigastric Pain, Nausea, Vomiting and anorexia. All diagnostic tests for other medical etiologies were negative. High-resolution computed tomography revealed acute pancreatitis. One of the primary differential diagnosis was drug induced pancreatitis so therefore we discontinued **escitalopram** and began IV fluid hydration.. His symptoms and serum labs including lipase significantly improved and resolved afterwards. We recognize a need for increased awareness among physicians to the possibility of this rare **escitalopram**-associated pancreatic injury.
- We consulted the literature to make an appropriate treatment recommendation.

## Photos



Figure 1. CT Abdomen; Horizontal Section. (Figure 1), Arrows pointing to acute pancreatitis.

## Discussion

- Diagnosis of **Escitalopram**-Induced Pancreatitis depends upon a strong association between a history of drug therapy and the onset and progression of gastrointestinal complaints. To ensure accurate diagnosis, other causes of pancreatic damage such as infectious, inflammatory disease must be excluded. Detailed literature review demonstrated a significant association between SSRIs and acute pancreatitis and the risk was much higher in the first few weeks of following initiation of SSRIs. There are 2 main mechanisms listed below:

  - SSRI's(Escitalopram)** can cause cellular apoptosis leading to acute pancreatic injury.
  - Another proposed mechanism is that **SSRI's(Escitalopram)** causes inhibition of insulin secretion leading to pancreatic insult and this can further lead to development of diabetes and hence causing chronic pancreatitis as well.

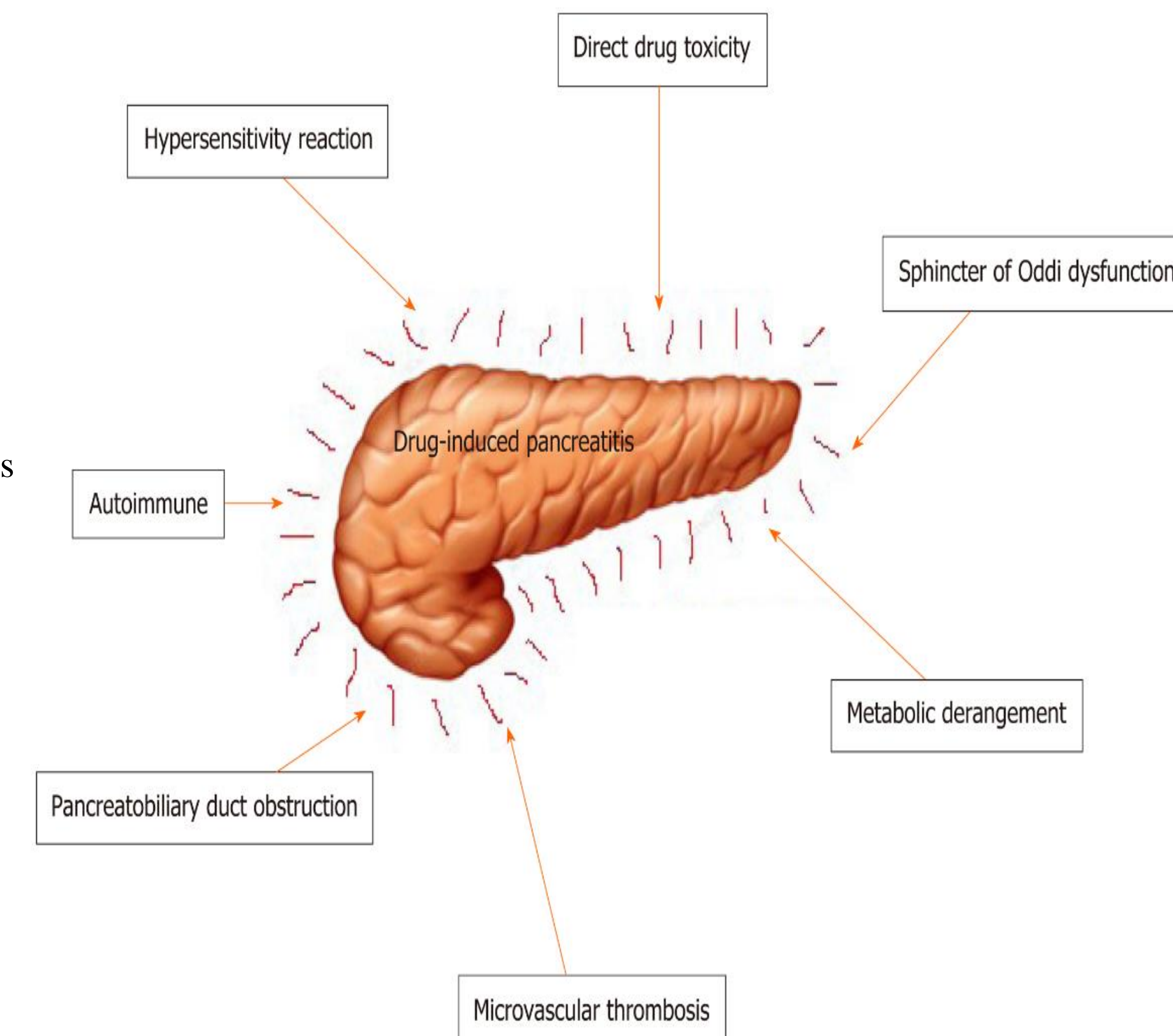


Figure 2. Mechanisms leading to pancreatic insult in drug-induced pancreatitis

## References

- Ljung, Richard., Selective serotonin receptive inhibitors and risk of acute pancreatitis. Journal of clinical psychopharmacology. 2012; 336-339
- Rünzi M**, Layer P. Drug-associated pancreatitis: facts and fiction. *Pancreas* 1996; **13**: 100-109 [PMID:8783341]
- Werth B, Kuhn M**, Hartmann K, Reinhart WH. [Drug-induced pancreatitis: experience of the Swiss Drug Adverse Effects Center (SANZ) 1981-1993]. *Schweiz Med Wochenschr* 1995; **125**: 731-734.
- Escitalopram Induced Pancreatitis: An Unusual Culprit, American Journal of Gastroenterology: October 2018 - Volume 113 - Issue - p S736
- Conti Bellocchi, (2015). Drug-induced acute pancreatitis. *Pancreapedia: Exocrine Pancreas Knowledge Base*, DOI: 10.3998/panc.2015.32
- Lexapro® (Escitalopram) [Package insert]. Irvine CA: Allergan USA Pharmaceuticals, 2016.