

Doxycycline induced pancreatitis: A rare cause of drug-induced pancreatitis

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Background

Although pancreatitis is commonly caused by alcohol and gallstones, drug-induced pancreatitis should be considered when other causes have been ruled out(1). The incidence is 0.5 to 5.3%.(2)Among side effects of various medications, pancreatitis can be easily missed since there is very limited data on the same. High degree of suspicion is required especially in geriatrics population who are on multiple medications(3). Doxycycline, a tetracycline, is a bacteriostatic drug that covers anaerobic, gram-positive and gram-negative bacteria. The most common side effects are gastrointestinal symptoms, photosensitivity, renal and hepatic impairment; our case demonstrates doxycycline-induced pancreatitis which is one of the rarest side effects(4)

Case Report

A 74-year-old female with medical history of hypertension (on amlodipine), hyperlipidemia (on pravastatin), chronic back pain, subdural hematoma s/p cranioplasty was recently started on doxycycline for scalp wound infection 4 weeks ago, presented with severe onset of epigastric pain radiating to the back. Patient has history of cholecystectomy and denied any alcohol use.

Vitals

Afebrile
HR: 65
RR: 15
BP: 162/63

Labs/Imaging

- CBC: 11.10/15.3/45.3/160
- BMP: 142/4.4/32/15/0.60/118
- AST:28
- ALT:18
- ALP:135
- Lipase: 1161
- Total Bilirubin: 0.3
- Calcium: 10.1
- INR: 0.92
- CT Abdomen and Pelvis with IV/Oral contrast showed: Peripancreatic inflammatory change and fluid consistent with acute pancreatitis.

References

1. McArthur KE et al. Review article: drug-induced pancreatitis *Aliment Pharmacol Ther.* 1996 Feb;10(1):23-38.
2. Drug-induced acute pancreatitis: results from the hospital-based Berlin case-control surveillance study of 102 cases
 - [A. Douros](#) [E. Bronder](#) [F. Andersohn](#) [A. Klimpel](#) [M. Thomae](#) [Ockenga](#) [R. Kreutz](#) [E. Garbe](#)
3. Drug-induced pancreatitis: an update. Trivedi CD1, Pitchumoni CS.
4. Doxycycline-Induced Acute Pancreatitis: A Rare Adverse Event. Prashanth Rawla, c and Jeffrey Pradeep Rajb

Discussion

- On admission, the patient was found to have Lipase of 1161 and CT abdomen/pelvis with IV and oral contrast showed peripancreatic inflammatory changes and fluid consistent with acute pancreatitis. There was no diffuse enlargement of pancreas or beading of the pancreatic duct, hence ruling out autoimmune pathology. Lipid panel was ordered, and triglycerides were within normal limits. Gastroenterology was consulted and doxycycline was stopped. Patient had symptomatic improvement in 2 days. Her pain resolved, and diet was advanced gradually. Alternative antibiotic therapies were discussed with the infectious disease team and vancomycin was recommended. 1-week post discharge follow up confirmed complete resolution of symptoms

Conclusion

- Doxycycline is commonly used drug in both inpatient and outpatient setting. Although we couldn't prove by the re-challenge test that doxycycline caused pancreatitis, our case did demonstrate the causal relationship between the two. Drug-induced pancreatitis should be one of the differentials in cases of idiopathic pancreatitis.