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Poster

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Sildenafil-Induced Acute Pancreatitis

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Abstract

Introduction:

Acute pancreatitis (AP) refers to inflammation of the pancreas and can be caused by gallstones, alcohol, ERCP, trauma, hypercalcemia, drugs, etc [1, 2]. However, AP secondary to Sildenafil has not been described previously.

Case Presentation:

A 22-year-old male presented with epigastric pain and anorexia for 20 days. There was no history of insect bites, trauma, procedure, chronic illness, and alcoholism. He reported starting Sildenafil. TLC was 20,600 cells/mm3 with 84% neutrophils. SGOT, SGPT and ALP were 108.0 IU/L, 93.3 IU/L, and 184.9 IU/L respectively. Serum amylase was 342.5 IU/L and serum lipase was 448.1 IU/L. Serum ionised calcium, triglycerides, procalcitonin and CRP were 3.19 gm/dL, 133.42 mg/dL, 3.57 ng/mL and 140.24 mg/L respectively. CECT was suggestive of AP. Blood cultures were sterile. Given the history and CECT finding, he was diagnosed with Sildenafil-induced AP and was managed with fluid resuscitation and withdrawal of the precipitating factor. Serum amylase and lipase decreased with the treatment and he improved clinically.

Discussion:

Badalov et al. (2007) classified AP: Class I - ⩾1 case report describing a recurrence of AP with a rechallenge with the drug, Class II - demonstrate a consistent latency in 75% or more of the reported cases, Class III - ⩾2 published case reports but without a rechallenge and a consistent latency period, Class IV - similar to class III but only 1 case published report [3]. The pathogenesis of drug-induced AP includes (1) Direct toxicity (2) Accumulation of toxic metabolites (3) Immune response (4) Hypersensitivity reaction [4]. Management of Sildenafil-induced AP is similar to that of any other AP i.e. with intravenous fluid resuscitation, analgesia and nutritional support followed by management of the underlying cause such as ERCP, cholecystectomy or withdrawal of the offending agent. Monitoring for complications such as pancreatic pseudocyst is essential [1].

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Sildenafil-Induced Acute Pancreatitis

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INTRODUCTION

Acute pancreatitis (AP) refers to inflammation of the pancreas and can cause significant morbidity [1]. The common causes include gallstones, alcohol, endoscopic retrograde cholangiopancreatography (ERCP), trauma, hypercalcemia, drugs and more [2].The pathogenesis of drug-induced AP can be attributed to (1) Direct toxicity (2) Accumulation of toxic metabolites (3) Immune response (4) Hypersensitivity reaction [3]. Drug-induced AP accounts for 5% of AP cases [3]. However, AP secondary to Sildenafil has not been described in the literature and our case is the first one.

CLINICAL PRESENTATION

- 22-year-old male
- C/o epigastric pain and anorexia X 20 days
- Started Sildenafil for erectile dysfunction recently; no other relevant history
- O/E: Pulse - 105 bpm

MANAGEMENT

S. No.	Parameter	Value	Reference Range
1	Total leucocyte count (TLC)	20,600 cells/mm³	4,000-10,000 cells/mm³
2	Percentage of neutrophils	84%	50-70%
3	Serum glutamate oxaloacetate transaminase (SGOT)	108.0 IU/L	0-40 IU/L
4	Serum glutamate pyruvate transaminase (SGPT)	93.3 IU/L	0-45 IU/L
5	Serum Alkaline phosphatase (ALP)	184.9 IU/L	50-270 IU/L
6	Serum amylase	342.5 IU/L	Upto 90 Iu/L
7	Serum lipase	448.1 IU/L	0-160 IU/L
8	Serum ionised calcium	5.19 gm/dl.	4.5-5.5 gm/dl.
9	Serum triglycerides	133.42 mg/dL	30-200 mg/dL
10	Serum procalcitonin	3.57 ng/mL	Less than 0.50 ng/mL
11	C reactive protein	140.24 mg/L	0-6 mg/L

- CECT whole abdomen: bulky and heterogenous pancreas with surrounding inflammatory changes and ill-defined peripancreatic fluid, suggestive of acute pancreatitis.
- Blood cultures - sterile.
- Dengue, chikungunya, Epstein Barr Virus, Cytomegalovirus and Parvovirus - negative.
- Diagnosis: Sildenafil-induced AP.
- Treatment - fluid resuscitation and avoidance of the precipitating factor.
- Result - His serum amylase and lipase decreased with the treatment. The patient improved clinically and was discharged in a stable condition.

DISCUSSION

- Overall, gallstones and alcohol - most common causes of AP [2,3].
- Badalov et al. divided drug-induced AP into 4 classes: Class I - at least 1 case report describing a recurrence of acute pancreatitis with a rechallenge with the drug, Class II - demonstrate a consistent latency in 75% or more of the reported cases, Class III - 2 or more published case reports but without a rechallenge and a consistent latency period, Class IV - similar to class III but only 1 case published report [5].
- The mechanism underlying Sildenafil-induced AP is unknown.
- Management of Sildenafil-induced AP is similar to that of any other AP i.e. with intravenous fluid resuscitation, analgesia and nutritional support followed by management of the underlying cause such as ERCP, cholecystectomy or withdrawal of the offending agent (Sildenafil in this case).
- Monitoring for complications such as pancreatic pseudocyst is essential [1].

CONCLUSION

It is possible that Sildenafil can cause AP. The management of AP remains the same i.e. fluid resuscitation, analgesia and treatment of the underlying cause.

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