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BMH Med. J. 2018;5(4):111-115 **Case Report**

Acute Pancreatitis Complicated With Hemorrhagic Pancreatitis And Duodenal Ulceration

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Abstract

Acute pancreatitis is a disease with broad spectrum of presentation and has high morbidity and mortality despite of intensive supportive care. Hemorrhagic pancreatitis is one of the calamitous countenance of this ailment unless diagnosed and treated early.

Here we are presenting a case of hemorrhagic pancreatitis which presented with seemingly benign symptoms. Thorough clinical evaluation and felicitous use of bedside ultrasonogram (USG) helped to identify this mortal disease. It was complicated due to the presence of ongoing bleed and severe anemia. Patient was transfused and subjected to emergency angiographic embolization.

Pancreatitis can be very rarely complicated by duodenal ulceration or hematoma due to the effect of bile, pancreatic juice or elevated pancreatic ductal hypertension, which was also seen in this patient.

Despite of all this grave impediments his condition dramatically improved and was discharged.

Key words: Acute pancreatitis, Hemorrhagic pancreatitis, Duodenal ulceration, intraduodenal hematoma, angiographic embolization

Introduction

Acute pancreatitis (AP) is the acute inflammatory condition of the pancreas with a wide spectrum of presentation. Mild disease is usually confined only to pancreas but it can be complicated by the extension of this inflammatory processes to the surrounding organs or even to the very remote organs. Trypsinogen is an intestinal proteolytic enzyme secreted by pancreatic acinar cells. Its an inactivated enzyme, which is activated in to trypsin in the small intestine under normal circumstances. In patients with pancreatitis due to unknown reasons, this enzyme is activated within the pancreas itself. Activated trypsin causes activation of other pancreatic enzymes, complements and kinins, leading to the auto digestion of pancreas. This process continues as a chain reaction causing more and more inflammation, which spreads initially to the surrounding organs and later to the very remote organs leading to systemic inflammatory response syndrome, multi organ failure and death [1].

Hemorrhagic pancreatitis (HP) is one of the rare and late consequence of the this disease which is evidenced by bleeding either within or around the pancreas. It can be due to a bleeding pancreatic or peripanreatic pseudo aneurysm in most of the cases (60%), but can also be due to a bleeding necrotizing pancreatitis (20%) or a bleeding pancreatic pseudo aneurysm (20%) [2].

Pseudo aneurysm most commonly involves either splenic or gastroduodenal arteries and can complicate 10% of the cases. It is managed either surgically or using angiographic embolization [3].

Case report

An elderly male with past history of hypertension presented with seven day history of generalized tiredness and one day history of moderate, stabbing epigastric pain radiating to back. On arrival he was conscious, oriented with normal vitals. On head to foot examination he was found to be pale. Per abdomen was tense, tender with rebound tenderness and no guarding. Per rectal examination showed no melena. Other systems were found to be normal. Bedside USG showed moderate to severe free fluid in the abdomen. In view of the above findings an intra abdominal bleed was suspected either due to a perforated intestine or due to pancreatitis or due to coagulation abnormalities. Routine investigations were sent along with serum amylase, lipase and coagulation profile, which were found to be negative except for a Hemoglobin of 7.5g/dl, elevated creatinine (2.7g/dl) and low sodium (123g/dl).

Emergency CECT abdomen was taken after administrating fluids in view of intra abdominal bleeding. CECT showed a large pseudo aneurysm arising from superior pancreaticoduodenal artery with active contrast extravasation (**Figure 1, 2**). It also showed a bulky and heterogeneous pancreas with massive hemoperitoneum (**Figure 3**). Moreover it showed heterogeneous mucosal enhancement of the D2 and D3 segment of duodenum with focal punctate enhancement.

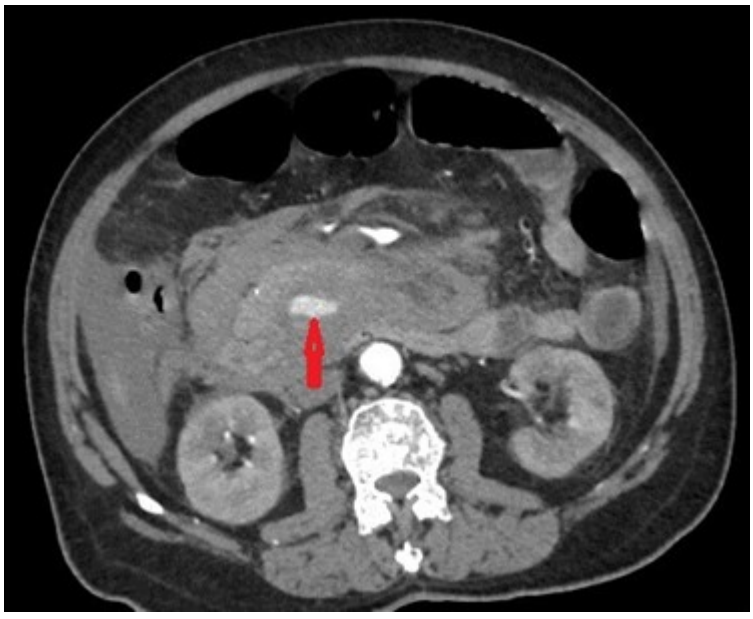

Figure 1: CECT abdomen axial view. Red arrow pointing a pancraeticoduodenal artery pseudo aneurysm

Figure 2: CECT abdomen virtual image. Green arrow showing pancraeticoduodenal artery pseudo aneurysm

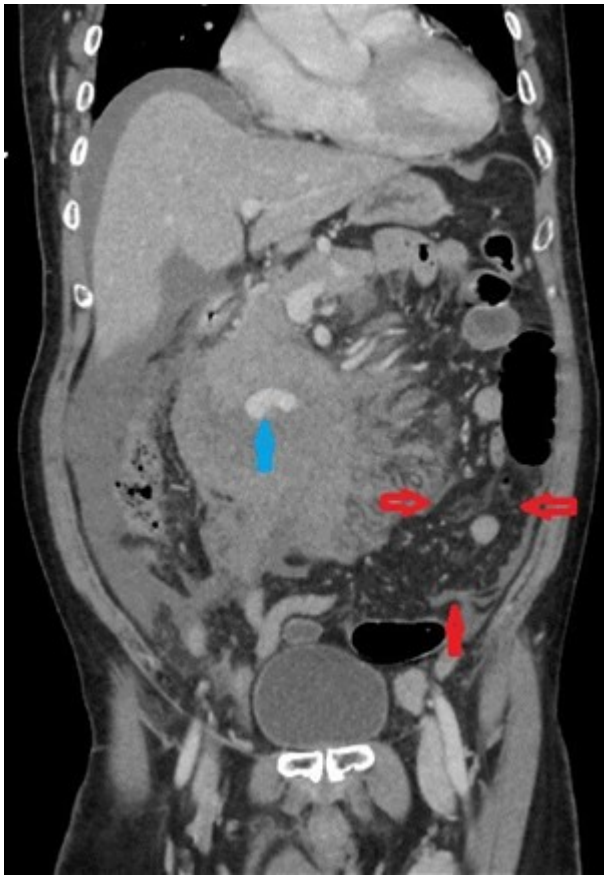

Figure 3: CECT abdomen. Blue arrow pointing pancraeticoduodenal artery pseudo aneurysm and red arrows showing hemoperitoneum.

In view of the active bleeding the patient was subjected to emergency arterial embolization and bleeding was controlled successfully. Later he was admitted in ICU and managed conservatively

Later he underwent elective video upper gastrointestinal endoscopy which showed a duodenal ulceration at D2 and D3 junction. He was shifted to room by day five and discharged by day two weeks.

Discussion

This case is very special due to various reasons .Firstly ,here the initial presenting complaint of this patient was tiredness due to low hemoglobin rather than that of a classical acute pancreatitis.The patient was admitted and transfused from a local hospital as a case of microcytic hypochromic anemia ,where they were not able to detect either pancreatitis or bleeding pseudo aneurysm due to the absence of classical symptoms.

There are multiple risk factors of pancreatitis (Figure 4) of which the most common are gall stone (35%-75%) and alcohol (25%-35%). Nearly one-fifth are precipitated by unknown factors (**Figure 4**). In the above patients there was no known risk factor for developing pancreatitis.

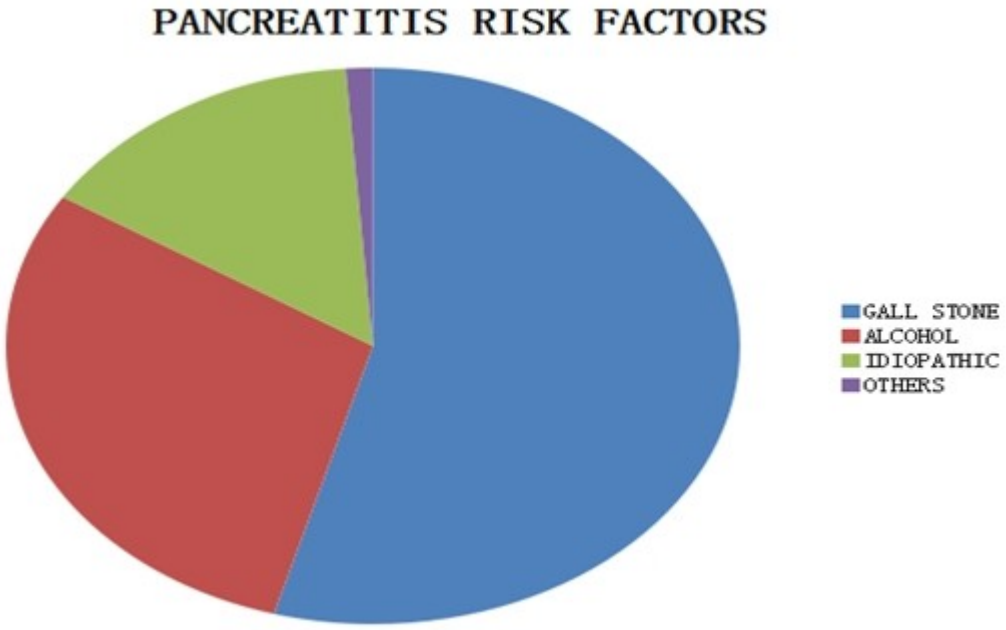

Figure 4: Pie chart showing common risk factors associated with pancreatitis and their relative contribution

Severity of AP can be evaluated using revised Atlanta classification in to mild, moderate or severe depending up on the presence of organ failure and/or local or systemic compliations [4]. The above case belongs to severe form of AP due to persistent renal failure (>48hours) and systemic complications like intra abdominal bleeding.

There is a scoring system to consider organ failure known as Marshall scoring system, which evaluate respiratory failure [PaO2/FiO2 of 300 or less], cardiovascular failure[systolic blood pressure(SBP) <90mm Hg and not a fluid responder or SBP <90mm Hg and Ph <7.3] and renal failure [Creatinine 1.9mg/dl or more]

Diagnosis of AP is based on the clinical presentation, elevated serum markers and imaging. Any two of them should be positive to consider the diagnosis. In this case there was no classical presentation initially, since it presented as generalized tiredness in the early days. Serum Amylase and lipase are highly useful serum markers for diagnosing AP. When they are used together their specificity increases further. In this case both the above markers were not elevated. There is a third test named urine Trypsinogen-2 dipstick test which is much more sensitive (82%) and specific (94%) than the

serum markers [5]. We proceeded to contrast CT of the abdomen, which is highly recommended if we are in a clinical dilemma about AP.

Bedside USG was so helpful to suspect an ongoing bleed when it was correlated with the blood results. So that this case also highlights the routine use of adjuncts like USG, for the early identification of life threatening conditions, without need of mobilization of the patient from the resuscitation table.

Treatment of AP is mainly supportive involving early aggressive fluid hydration. But HP is a condition with very high mortality which should be corrected by surgery or angiographic embolization. Once the bleed was detected, it was controlled with angiographic embolization at the earliest [3]. Early diagnosis and on time interventions really played a key step in the survival of this patient.

Duodenal ulceration (DU) is one of the most common gastro-intestinal disease, which is caused most commonly by Helicobacter pylori infection and non-steroidal anti inflammatory drugs. There are a very few case reports in which DU is listed following an episode of AP, which can be due to the effect of bile, pancreatic juice or elevated pancreatic ductal hypertension. In addition to DU, pancreatitis can also cause intramural duodenal hematoma, which is also vey rare. Thorough literature review revealed no cases of AP which complicated both into a HP and duodenal ulcer which was found in this case.

Conclusion

HP is a serious complication of pancreatitis with high mortality. High index of suspicion and clinical correlation is necessary for the diagnosis. Early diagnosis and treatment can reduce the mortality and morbidity very significantly. Routine use of bedside USG can aid in the early diagnosis of fatal diseases without mobilizing the patient from the resuscitation table.

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