

Case Report

Hemorrhagic Pancreatitis: Traumatic or otherwise- A Misinterpretation

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ABSTRACT

A single sign can be interpreted differently by two people especially in cases of alleged history of assault or trauma. It's very important to correlate the same with investigatory findings and complete examination. A case came to us for review with cause of death as traumatic hemorrhagic pancreatitis. After perusal of all the clinical records and autopsy report doubts were raised over the probable cause of death. The presented clinical signs lead the board to a probable different opinion.

Keywords: Traumatic hemorrhagic pancreatitis, Blunt trauma abdomen, Grey turner sign, Cullen sign

INTRODUCTION

Interpretation of a clinical sign requires both knowledge and experience. Presenting complains and its co-relation with history and clinical signs most of the times helps in establishing the diagnosis. A case came to us for review with cause of death as traumatic hemorrhagic pancreatitis. After perusal of all the clinical records and autopsy report doubts were raised over the probable cause of death. The clinical signs present lead the board to a probable different opinion.

CASE SUMMARY

It was alleged that on one night the deceased, a truck driver, was beaten by a mobile police team. Subsequently he was admitted to general hospital on the same day with complaints of pain and distended abdomen and

vomiting. He was a chronic alcoholic. On examination bowel sounds were absent. He was diagnosed with traumatic hemorrhagic pancreatitis consequent upon blunt trauma abdomen. He expired within three days of hospitalization. The deceased was a febrile throughout the course of treatment.

On post mortem examination there was discoloration of skin in loin and around umbilicus regions. A few erythematous skin patches were found over anterior part of chest and abdomen. The peritoneal cavity contained blood stained exudate. Some free fluid was found in pleural cavities. All the visceral organs were intact and congested with some degree of erosion of gastric mucosa. Pancreas was grossly edematous and hemorrhagic. The abdominal wall, back and spinal column were intact. The cause of death was opined as hemorrhagic pancreatitis

leading to shock and cardiopulmonary arrest consequent upon blunt trauma abdomen.

Due to suspicion over the manner of death and alleged history of custodial death, a medical board was constituted to review the case. National Human Right Commission (NHRC) specifically asked to opine whether the injury found on the body of the deceased were of the nature which might be caused due to fall from truck or otherwise.

After perusal of the clinical records and post mortem examination report, the board opined that the presence of erythematous skin patches over loin region (which is suggestive of Grey Turner sign; edema and bruising like appearance) and around umbilicus (which is suggestive of Cullen sign) are indicative of retroperitoneal hemorrhage associated with pancreatitis. The sudden appearance of these findings without fever is also suggestive of hemorrhagic traumatic pancreatitis, which could be possible by blunt force trauma to abdomen. This kind of injury may be possible if a person falls on a blunt projecting object or a blunt projecting object is forcefully applied over the abdomen. The external impact of the injuries may remain obscure due to laxity of anterior abdominal wall and clothes. However there is no other patterned injury over the body specially extremities (defense injury), which is suggestive of absence of physical assault.

DISCUSSION

Injury to the pancreas isn't common and isolated pancreatic injury is even less common. The pancreas lies anterior to the spinal column and might be compressed against it [2,3]. Damage to the pancreas is regularly associated with injury to different organs, especially the duodenum, and this may cause early death of the patient [1,4,5]. The incidence of pancreatic damage in patients with an penetrating injury is substantially higher. According to Nikeghbalian *et al.* about 20-30% patients of Gunshot wounds (GSWs); shotgun wounds; and stabbings to the back, flank, and stomach area show penetrating injuries [14]. This finding signifies another key point in pancreatic damage: Because the blunt force

required to injure the pancreas is significantly high and penetrating force as a general rule injures various organs, pancreatic wound is rarely isolated. When there is blunt pancreatic injury, with the possible exception of child abuse or a well placed stab wound in the back, the treating doctor can be sure that multiple organs are in like manner impacted. In this way, various organ injuries are a notice proposing the probability of pancreatic injury. Because of anatomical position, isolated pancreatic injury may occur with penetrating damage to the mid back as cut wounds or impalement. In a blunt trauma– provoked isolated pancreatic injury, fracture over the spinal segment is by and large observed in small children and is caused by direct stomach blows from mal-arranged seat straps or child abuse. Fortunately, both of these conditions are modestly exceptional [15].

The relatively protected retroperitoneal zone of the pancreas shields it from most events of blunt abdominal trauma. According to Venkatesh *et al.* in many cases pancreatic injury as a result of blunt force impact to the abdomen is due to compression of pancreas against the vertebral column [17]. Blunt pancreatic injury is more common in adolescents and young adults in light of the fact that they have a more thin or truant mantle of protective fat, as compared to the older adults.¹⁸ Orchestrated by repeat, wounds to the pancreas incorporate the body, head and tail. As per Cirillo *et al.* pancreatic injury is associated with other visceral organ injuries in most of the cases; 60% are duodenopancreatic wounds, while 90% incorporate no short of one other abdominal organ [16]. Isolated pancreatic injury may be missed or the examination may be conceded in light of the fact that the basic symptoms and signs of pancreatic injury are not obvious, and this may add to the morbidity and mortality related with this type of injury.

Traumatic wounds of the pancreas occur after blunt abdominal injuries or penetrating wounds with a proportion of 3:1 [7]. They are described by high morbidity and mortality with a 45-50% combined rate as published in literatures [8,9]. Pancreatic wounds occur in 3– 15% of all abdominal trauma [11-13]. Isolated traumatic wounds of the pancreas are rare; in 50– 98% of cases they are

related with wounds to different organs, for example, spleen, liver, kidney, large or small digestive tract, veins or arteries [11-13].

Blunt trauma to the abdomen can occur in a variety of scenarios like road traffic accidents, seat belt injuries, fall from height, etc. According to Gad MA *et al* blunt injury is unequivocally connected with other co-morbid wounds, most common being damage is to extremities^[20].

The analysis of secluded wounds of the pancreas is troublesome, as a result of the absence of particular manifestations or signs. Studies have shown that the rise of amylase in both serum and peritoneal lavage liquid is neither sensitive nor particular for the conclusion of pancreatic injury [6]. Bradley, in a review of cases reported in literature of blunt pancreatic injury, found that serum amylase levels were increased in 82% of individuals with documented pancreatic wounds.⁴ Since raised amylase levels has been seen in over 75% of patients with blunt abdominal injury and demonstrated pancreatic damage, it ought to in any event be viewed as an indication of likely pancreatic damage in the setting of blunt abdominal injury and ought to show the requirement for additionally testing [4].

Abdominal pain is the cardinal manifestation. It occurs in around 95% of cases. The severity of symptoms relies upon the seriousness of the attack. Mild disease presents with just gentle abdominal delicacy. Serious disease presents with extreme abdominal pain and guarding, by and large localized to the upper abdomen. Rebound tenderness is rare. Hypoactive gut sounds, accompanied by epigastric distension, might be caused by peri-pancreatic spread of the inflammatory process that produces a generalized ileus, localized spread of the irritation to the adjoining small digestive tract that produces a sentinel loop, or confined spread of the inflammation to the adjacent transverse colon that delivers a colon cut-off sign. Tachycardia and mild hypotension may come about because of hypovolemia from sequestration of liquid in the pancreatic bed. Around 60% of patients develop second rate pyrexia from peripancreatic aggravation without clear disease. Ecchymoses in the flanks, called "Gray-Turner's sign," show retroperitoneal hemorrhage

from hemorrhagic pancreatitis, though ecchymoses in the periumbilical area, called "Cullen's sign," demonstrate intra-abdominal hemorrhage. Jaundice indicates choledochal block from gallstone pancreatitis^[19].

Pancreatitis due to alcohol abuse is an extremely difficult and conceivably lethal condition. As per Strate *et al*. around 33% of pancreatitis cases in the USA are related to alcohol consumption and overall 60-90% of pancreatitis patients have a background marked by chronic alcohol abuse. It is estimated that drinking in excess of 80g of alcohol/day for at least 6-12 years is required to cause symptomatic pancreatitis [21]. At the point when drivers were asked, about half confessed to drinking and driving. The numbers differed extraordinarily from nation to nation, be that as it may, going from 9% of drivers in Pakistan to 91% in Brazil saying they drank alcohol [22].

A non-operative conservative course of management is common in pancreatic injury. It is important to decide whether there are indications of Wirsung duct damage and duodenal damage. Without damage to the duct, meticulous monitoring is done in a surgical unit. Therapeutic treatment incorporates count calories; rehydration, with rectification of any electrolyte irregularity; nasogastric tube waste in instances of regurgitating; and absence of pain. Preventive anti-toxin treatment and octreotide are also advised [15].

CONCLUSION

In the present case there is no injury over any part of the body, but ecchymosis and bluish discoloration over chest and abdomen respectively are misinterpreted as injuries subsequent to blunt trauma. The same is verified on meticulous postmortem examination review. Moreover positive history of alcohol abuse further makes the initial conclusion on manner of death a bit dicey. Taking into consideration all the relevant findings the board ruled out the possibility of physical assault on the deceased. This case signifies the importance of proper clinical orientation of the autopsy surgeon for making a definitive conclusion of the postmortem examination findings along with the importance of proper history recording.

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