

## CASE REPORT

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### Pancreatic Trauma from a Book

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#### ABSTRACT

**Context** An early diagnosis of pancreatic trauma can be challenging and difficult because of the lack of correlation between the initial presenting features, radiological and laboratory findings, and the severity of the trauma. A high degree of suspicion is essential to diagnose pancreatic injury particularly in patients with blunt trauma to the abdomen. A computerised tomography scan is useful in making an early diagnosis of pancreatic trauma, localizing the site of the injury and in the identification of main pancreatic duct injury which has major implications in the management of the patient.

**Case report** Here in, we report an interesting case of a 40-year-old woman who sustained a tear in the tail of the pancreas following a blunt injury to the pancreas while she was carrying a book in front of her abdomen and collided against an edge of a door-frame. She was managed conservatively without any complications.

**Conclusions** A history of abdominal trauma, however trivial it may sound, needs to be appropriately investigated.

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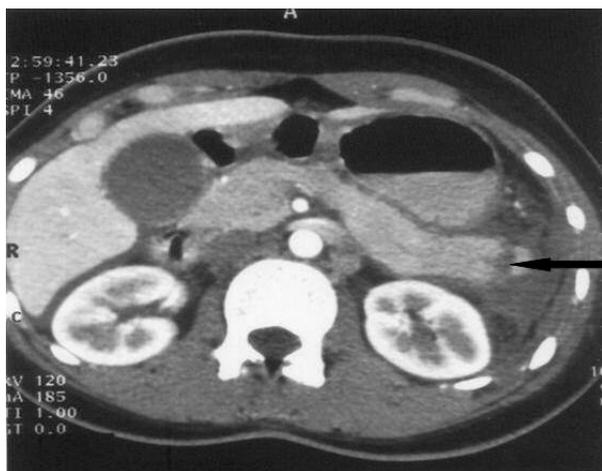
#### INTRODUCTION

Pancreatic injury occurs in less than 5% of major abdominal injuries [1]. Pancreatic

injuries may occur as a result of penetrating or blunt trauma to the abdomen. Many blunt injuries to the pancreas are not diagnosed early and end up with high morbidity and mortality. We report an interesting case of blunt pancreatic injury which was sustained in a 40-year-old woman while she was carrying a book in front of her abdomen and accidentally collided against an edge of a door-frame.

#### CASE REPORT

A 40-year-old woman presented with a 2-day history of constant epigastric pain with radiation to the back. She was of a thin habitus. She had previously been well. There was no history of alcohol intake. She denied any history of abdominal trauma. She was afebrile and haemodynamically stable. Abdominal examination revealed tenderness and guarding in the epigastrium. Both chest and abdominal plain radiographs were normal. The white cell count was within normal limits. Amylase was raised at 404 IU (reference range: 0-70 IU/L) and the liver function tests were normal. A provisional diagnosis of pancreatitis was made. An ultrasound scan of abdomen showed a collection of fluid between the spleen and the diaphragm, however there were no gallstones. A CT scan of the abdomen showed a vertical tear in the tail of the pancreas (Figure 1). The torn tail of the pancreas enhanced to the same degree as the rest of the pancreas suggesting



**Figure 1.** CT scan shows a tear in the tail of the pancreas.

an intact vascularity. The main pancreatic duct was intact. The rest of abdominal viscera were normal.

Further questioning of the patient revealed that two days prior to the onset of symptoms she was carrying a medical text-book in front of her abdomen and accidentally collided onto an edge of a door-frame. This incident was considered to be too trivial by the patient to be mentioned at the time of initial presentation.

A conservative line of management was initiated with a close observation of her general condition and vital signs. Her pain settled down and she made an uneventful recovery. A follow-up CT scan two months later showed the pancreas to be normal (Figure 2). Three years on, she is doing well without any complications.

## DISCUSSION

Even in modern surgical practice with improved technology and sophisticated diagnostic methods, pancreatic injury is a relative enigma. Pancreatic injury occurs in less than 5% of major abdominal injuries [1]. The relatively protected position of the pancreas in the retroperitoneum means that a high-energy force is required to damage it. Pancreatic trauma may occur from motor vehicle accidents or from penetrating trauma such as gunshot and stabbings to the back and abdomen [2]. Many blunt injuries to the

pancreas are not picked up immediately and, as a result, end up with higher morbidity and mortality.

Pancreatic injury can be frighteningly symptom free. But the more common scenario is for patients to exhibit severe peritoneal irritation. Serum amylase is notoriously unreliable in the diagnosis and may even be normal in the presence of a ductal disruption [2].

In patients with blunt injury to the pancreas, the CT scan provides the simplest and the least invasive diagnostic modality available at this time to aid in the detection of a stable blunt pancreatic injury [3]. It is contraindicated in patients who are haemodynamically unstable or who have a penetrating trauma in which the decision to operate has been made. CT scan is augmented by the judicious use of endoscopic retrograde cholangiopancreatography (ERCP) in the presence of pancreatic ductal injuries. Accurate and timely identification of major pancreatic ductal injury is imperative because the delay in diagnosis and the associated vascular injuries are largely responsible for the high mortality and morbidity associated with blunt pancreatic trauma [4].

In the absence of associated injuries, blunt injuries to the pancreas may be managed conservatively [5]. The decision to operate depends upon repeated clinical observation with evidence of deterioration in the patient's



**Figure 2.** A follow-up CT scan two months later.

general condition despite conservative management. Pancreatic resection is usually the most suitable treatment if CT scan or ERCP show that the duct has been damaged or transected [6].

Complications of pancreatic injury are bleeding, pancreatic abscess, recurrent pancreatitis, fistula formation and pancreatic pseudocysts. Blunt pancreatic injuries have a mortality rate of 20%. The cause of death is usually sepsis, late haemorrhage and pancreatic necrosis secondary to acute pancreatitis [7].

One must be aware of the presence of pancreatic injury after any blunt abdominal trauma. This case highlights the importance of eliciting a history of trauma in every case of acute abdomen. It further emphasises that a history of trauma, however trivial it may sound needs to be taken seriously and appropriately investigated.

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