INJURIES TO THE PANCREAS External injury

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Presentation and management The pancreas is not frequently damaged in blunt abdominal trauma but when it occurs it is often associated with injuries to other viscera, especially the liver, the spleen and the duode num. Occasionally , a forceful blow to the epigastrium (such as from the steering wheel in a car accident) may crush the body of the pancreas against the vertebral column. Penetrating trauma to the upper abdomen or the back carries a higher chance of pancreatic injury . P ancreatic injuries may range from a contusion or laceration of the parenchyma without duct disruption to major parenchymal destruction with duct disrup tion (sometimes complete transection) and, rarely , massive destruction of the pancreatic head. The most important factor that determines treatment is whether the pancreatic duct has been disrupted. Blunt pancreatic trauma usually presents with epigastric pain, whic h may be minor at first, with the progressive devel opment of more sev ere pain due to the sequelae of leakage of pancreatic fluid into the surrounding tissues. The clinical pre sentation can be quite deceptive; careful serial assessments and a high index of suspicion are required. A rise in serum amylase occurs in most cases. A CT scan of the pancreas will delineate the damage that has occurred to the pancreas (Figur e 72.21 If there is doubt about duct disruption, an urgent ERCP should be sought. MRCP may also provide the answer, but the images can be di ffi cult to interpret. Support with intrave nous fluids and a ‘nil by mouth’ regimen should be instituted while these investigations are performed. There is no need to rush to a laparotomy if the patient is haemodynamically stable, without peritonitis . It is preferable to manage conservatively at first, investigate and, once the extent of the damage has been ascertained, undertake appropriate action. Operation is indicated if there is disruption of the main pancreatic duct; in almost all other cases, the patient will recover with conservative management. In penetrating injuries, especially if other organs are injured and the patient’s condition is unstable, there is a greater need to perform an urgent surgical exploration. Assessment of pancreatic damage and duct disruption a t the time of surgery can be di ffi cult because the bruising associated with the retro peritoneal damage prevents clear visualisation of the pancreas. A patient and thorough examination of the gland should be carried out. Haemostasis and closed drainage are adequate for minor parenchymal injuries. If the gland is transected in the body or tail, a distal pancreatectomy should be performed, with or without splenectomy . If damage is purely confined to the head of the pancreas, haemostasis and external drainage - - are normally e ff ective. In the emergency setting, in an unsta - ble patient with concomitant injuries, a surgeon unaccustomed - to pancreatic surgery should refrain from trying to ascertain whether the duct in the pancreatic head is intact or embarking - on a major resection. However, if there is severe injury to the pancreatic head and duodenum, then a pancreatoduodenec - tomy may be necessary .). Summary box 72.3 - External injury to the pancreas /uni25CF /uni25CF /uni25CF /uni25CF Prognosis The most common cause of death in the immediate period is bleeding, usually from associated injuries. Once

the acute phase has passed, the morbidity related to the pancreatic injury itself is treatable, with a complete return to normal activity - being the usual outcome. Persistent drain output occurs in up to a third of patients (see Pancreatic fistula). Sometimes, in the aftermath of trauma that has been treated conservatively , duct stricturing develops, leading to recur rent episodes of pancreatitis. The appropriate treatment in such cases is resection of the tail of the pancreas distal to the site of duct disruption.

Figure 72.21 Computed tomography scan showing a pancreatic transection due to a bicycle handlebar injury. A distal pancreatectomy was performed. Other organs are likely to be injured It is important to ascertain if the pancreatic duct has been disrupted CT and ERCP are the most useful tests Surgery is indicated if the main pancreatic duct is disrupted

is intact, the cyst can be aspirated percutaneously in the first instance; it may not be necessary to undertake a cyst gastros tomy . If the cyst develops in the presence of complete disrup tion of the pancreas, there is no alternative but to undertake a distal resection or, occasionally , a pancreatojejunostomy with a Roux-en-Y loop. In a patient who pr esents with a peri pancreatic cyst and a history of previous blunt abdominal trauma, do not assume that it is a post-traumatic pseudocyst. The possibility of a cystic neoplasm should be considered and excluded.

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