Pancreaticoduodenectomy With Left Lateral Hepatic Segmentectomy : A Rare Procedure For The Management Of Complex Pancreaticoduodenal And Liver Injuries In Blunt Abdominal Trauma

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Abstracts: Context : Pancreaticoduodenal complex injuries are uncommon after blunt abdominal trauma and are difficult to diagnose. Case Report : We report a case of 25 years old male who suffered massive Pancreaticoduodenal complex with liver injuries due to blunt abdominal trauma. At exploration we found that 2nd part of duodenum and head of pancreas were completely shattered and segment II & III of liver were lacerated. We performed Pylorus preserving Pancreaticoduodenectomy with segment II and III resection. Conclusion : Pancreaticoduodenal injuries should be suspected in every patient with trauma to upper abdomen. Exploration should be done at the earliest. [Atul Vats et al. NJIRM 2011; 2(3) :101-103]

Key Words: Pancreaticoduodenal injury, segment II and III resection.

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Introduction: Pancreaticoduodenal complex injuries after blunt trauma abdomen are uncommon. They are usually diagnosed when laparotomy is done for other associated injuries. We report a case of 25 years old male who presented with massive Pancreaticoduodenal complex and liver injury.

The patient was operated and successfully discharged. So Pancreaticoduodenal injury should be suspected in every case of blunt trauma to upper abdomen.

Case Report : A 25 years old male suffering from diffuse abdominal pain was admitted in the emergency department. He suffered a blow to the abdomen due to motor vehicle accident. He came about 15 – 16 hours after accident. At the time of admission patient was unstable. His physical examination revealed abdominal distension with tenderness, guarding, rigidity and decreased bowel sounds. X-ray of the abdomen was suggestive of gas under the diaphragm. Patient was given fluid challenge and immediately shifted to operation theatre . On exploration we found that second part of duodenum and head of pancreas were completely shattered. Retroperitoneal hematoma extending from inferior border of pancreas to the mesocolon and small bowel mesentry and on right side extending behind the duodenum upto the Gerota's fascia was present.

Further exploration revealed that segment II & III of liver were deeply lacerated and discoloured. No additional injuries were found. We performed a pylorus preserving Pancreaticoduodenectomy along with segment II and III resection. Drains were placed in subhepatic space, pelvic cavity and in the retroperitoneal area behind the pancreaticojejunostomy. Hepaticojejunostomy was done over T – tube. Nasogastric tube was passed distal to gastrojejunostomy for feeding. Feeding was started on third postoperative day, initially with liquid and then semisolids. Drains were removed on 7^{th} and 10^{th} postoperative day. Patient was discharged on 15^{th} day with T-tube in situ. Prior to discharge CECT of abdomen was performed. T-tube was removed after 4 weeks after T-tube cholangiogram.

Discussion: Pancreaticoduodenal injuries constitute about 5% after blunt trauma and majority are associated with other intraabdominal injuries because of close anatomic relationship with other solid organs and major vessels[1]. Blunt injuries are difficult to diagnose because patient may have subtle findings on admission. Our patient had massive disruption of Pancreaticoduodenal complex with injury to segment II and III of liver. The gravity of blunt intraabdominal injuries is often minimized. Suspicion must be maintained with awareness of mechanism of injury. Abdominal pain is the most common symptom. At the time of

injury, patient with Pancreaticoduodenal complex injury usually experience sharp mid epigastric pain followed by signs of chemical peritonitis within next few hours. Exploratory laparotomy remains the ultimate diagnostic test. The choice of management depends on the grade of injury, involvement of associated organs and the general condition of the patient[2]. Pancreaticoduodenectomy for combined pancreaticodunenal injuries is rarely resorted to in the trauma setting owing to severe concomitant injuries[3,4,5]. Pancreatico-dudenectomy should be reserved for patient who have devascularized pancreatic head or when ampulla is damaged[4,5,6].

Other options for the management of patient with such severe injuries include duodenal diverticularization, pyloric exclusion with gastrojejunostomy[7,8] and triple tube decompression. We had to resort to whipples procedure with segment II and III resection in our patient because of devastating injury and to rule out injury to superior mesentric artery and vein as there was retroperitoneal hematoma. Leaving behind devitalized tissue would have resulted in postoperative infective complications. Aggressive anatomic resection of liver to remove the site of necrosis is associated with low mortality and low liver related morbidity rates when performed by experienced surgeons[9].

Conclusion: Early diagnosis of Pancreaticoduodenal injuries is important in the setting of blunt abdominal trauma and exploration should be done at the earliest.

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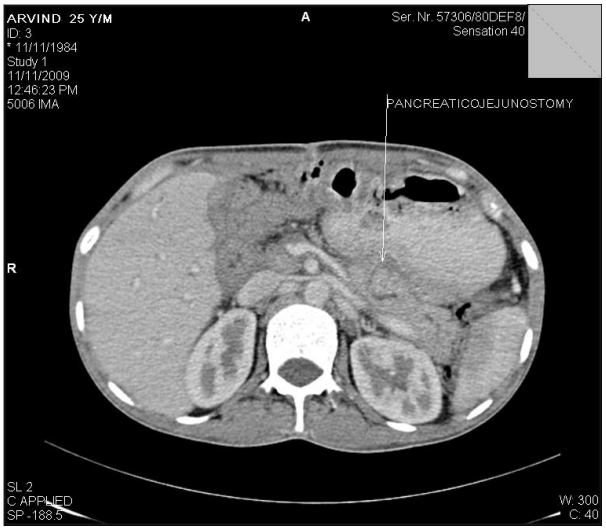
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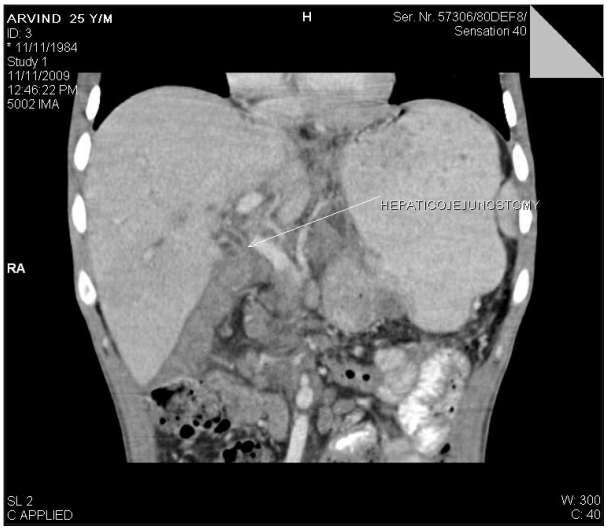
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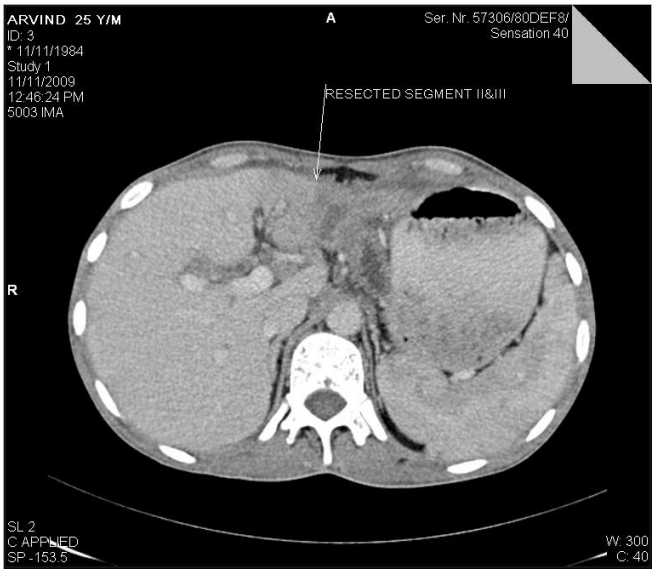
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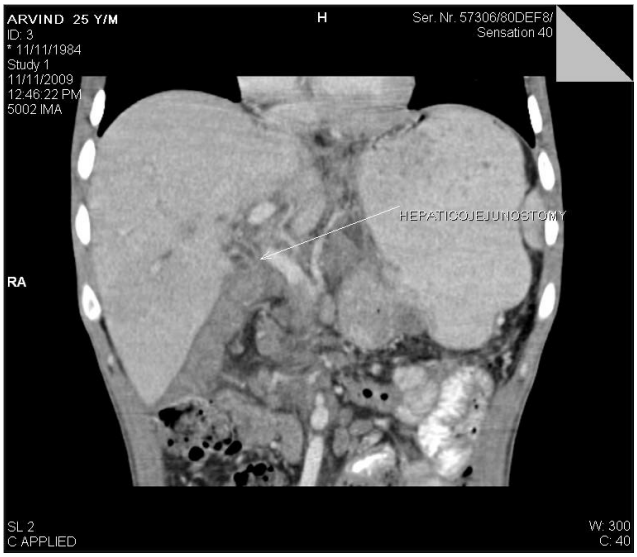
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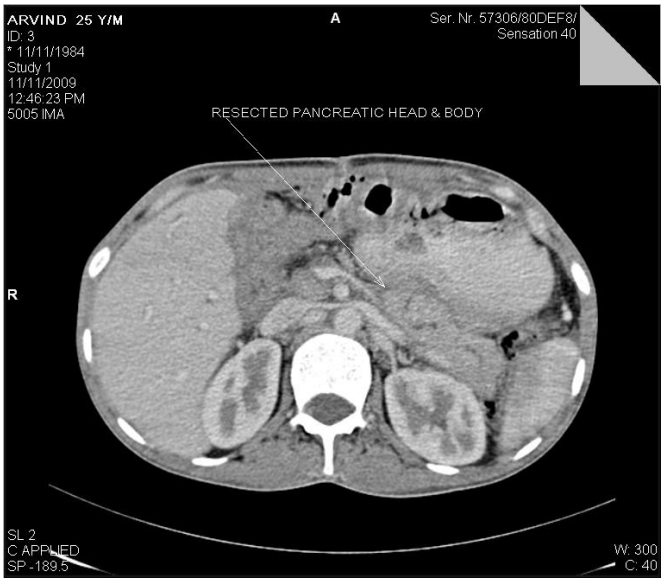
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