ENDOSCOPIC ULTRASOUND (EUS) DIAGNOSIS OF BLUNT PANCREATIC TRAUMA ASSOCIATED TO THE SUPERIOR MESENTERIC VEIN THROMBOSIS

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ABSTRACT – Background - Blunt pancreatic injuries occur when a high-energy crushing force is applied to the upper abdomen. In adults, the majority of blunt pancreatic injuries result from motor vehicle accidents. Case report - Male with 32 years old had a high-energy crushing history in which he was pressured by the chest on the front car area. His life signs demonstrated to be regular. Ct scan demonstrated body pancreatic edema. All routine laboratorial exams were normal, EUS revealed pancreatic lesion grade II without involvement of the pancreatic duct and an impressive superior mesenteric vein thrombosis. He was sustained by means of anticoagulation for about two months and after that time multislice CT scan showed a mesenteric vein recanalization and a normal pancreatic parenchyma. The patient had an uneventful follow-up. Conclusion - Patients presenting possible pancreatic trauma associated to superior mesenteric vein thrombosis, EUS must be used firstly.

INTRODUCTION

Blunt pancreatic injuries occur when a high-energy crushing force is applied to the upper abdomen. In adults, the majority of blunt pancreatic injuries result from motor vehicle accidents. Some cases of acute pancreatic injury may be difficult to diagnose by conventional imaging studies including CT and transabdominal ultrasonography. Endoscopic ultrasonography (EUS) provides high resolution of the pancreas and may be useful for diagnosing pancreatic trauma, as has been reported for the diagnosis of pancreatic cancer, pancreatic endocrine tumor, and acute pancreatitis.

CASE REPORT

Male with 32 years old had a high-energy crushing history in which he was pressured by the chest on the front car area. He was then promptly subjected to the Surgery Emergency Room in the Hospital Estadual de Sapopemba - FMUSP with volemic shock (low level). His life signs demonstrated to be regular. However, it was found superior abdominal pain during examination. Ct scan demonstrated body pancreatic edema. All routine laboratorial exams were normal, EUS revealed pancreatic lesion grade II without involvement of the pancreatic duct and an impressive superior mesenteric vein thrombosis. He was sustained by means of anticoagulation for about two months and after that time multislice CT scan showed a mesenteric vein recanalization and a normal pancreatic parenchyma. The patient had an uneventful follow-up.
normal, despite of amylase that was found 410 mL/dL. In the present case it was suspected a solid abdominal trauma organ lesion and then EUS was indicated due to stability of the general conditions during outcome evaluation. The EUS revealed pancreatic lesion grade II without involvement of the pancreatic duct (Figure 1) and an impressive superior mesenteric vein thrombosis (Figure 2). The patient was sustained by means of anti-coagulation for about two months and after that time the multislice CT scan showed a mesenteric vein recanalization and a normal pancreatic parenchyma. The patient had an uneventful follow-up.

**DISCUSSION**

Mesenteric vein thrombosis symptoms are often non-specific but include abdominal pain, nausea, vomiting, diarrhea and gastrointestinal bleeding. In some patients, abdominal pain seems out of proportion to relatively minor findings on physical examination. Other patients may have symptoms that gradually increase in severity over several days prior to medical consultation.

Although the highest concentration amylase is not a reliable indication of pancreatic trauma, same authors recognize the association between hyperamylasemia and pancreatic trauma. However Vitale et al., in an interesting report in which serum amylase was measured in 60 patients with isolated blunt head trauma, specifically excluding patients with abdominal trauma, suggested a central nervous system regulation pathway of serum amylase levels and implying that it is not a reliable indication of pancreatic injury.

Although transabdominal ultrasonography has the advantages of easy and fast performance, ultrasonography often has inadequate visualization of the pancreas and is somewhat less sensitive for diagnosing pancreatic trauma than CT.

Abdominal CT scan have a reported sensitivity and specificity as high as 80% in diagnosing pancreatic injury, although the accuracy of this examination is largely dependent on interpreter experience, quality of the scanner and the time from injury. It has the disadvantages of complicated usage, limited repeatability, and radiation exposure. Additionally, the load of contrast material might worsen the renal insufficiency associated with pancreatic injury.

In patients hemodynamically stable, EUS has some advantages due to can be positioned very close to the pancreas and mesenteroportal confluence. Duplex scan resource, accuracy of the images, mobility of the equipment, absence of radiation exposure, and no requirement of contrast material are the EUS advantages.

In whom CT fails to detect pancreatic injury despite abdominal pain and persistent hyperamylasemia, EUS may demonstrate pancreatic lesions. EUS may play a role in the evaluation of blunt pancreatic trauma, especially if a CT scan is negative or equivocal in patients suspected of pancreatic trauma or if CT study is not possible because of the inability to move such patients. Moreover, EUS can be repeatedly performed at the bedside.

**CONCLUSION**

Patients presenting possible pancreatic trauma associated to superior mesenteric vein thrombosis, EUS must be used firstly.

**REFERENCES**