

SHORT COMMUNICATION

Management of Pancreatic Injuries Involving the Main Pancreatic Duct

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INTRODUCTION

Traumatic injuries to the pancreas, such as acute bleeding, pancreatic leaks, abscesses, fistulae, and pancreatitis, are uncommon but can cause significant morbidity and mortality. Pancreas injuries were classified as involving the head, body, and/or tail of the pancreas, depending on where the injury occurred. Even though surgeons have long known that ductal injury is the primary source of pancreatic-specific morbidity and mortality, early taxonomy for pancreatic injury did not necessitate determining whether the pancreatic duct was involved.

TREATMENT OF WALLED-OFF PANCREATIC NECROSIS (WOPN)

WOPN's management has changed throughout time. Many collections are self-resolving and do not require assistance. Nutritional support and infection therapy are two important aspects of medical care. Minimally invasive endoscopic procedures are now the standard of care for collections that need to be drained. Drainage and decompression may be possible with endoscopic transmural puncture and stent insertion. Transluminal instrumentation with lavage, debridement, and necrosectomy may be required for more difficult collections. Injuries to the pancreatic duct, such as strictures, leaks, and disconnections, are relatively prevalent. The pancreatic ductal damage must be addressed in order for management techniques to be successful in the long run. A multidisciplinary strategy involving doctors who specialise in the management of severe acute pancreatitis and its consequences is required to provide high-level care for patients [1].

Patients with WOPN benefit from minimally invasive therapy techniques. Most patients will require close monitoring, medical treatment, and nutritional assistance. The basic techniques for collections requiring intervention are endoscopic transmural drainage and necrosectomy. Endoscopic drainage protocols are being modified to lessen adverse effects and the number of treatments needed to resolve the problem [1].

MANAGEMENT OF PANCREATIC TRAUMA

The surgeon faces a difficult task when dealing with pancreatic injury, and failure to handle it properly might result in serious implications for the patient. The management options for pancreatic trauma are discussed, as well as technical difficulties. External drainage can be used to treat most pancreatic injuries. Distal pancreatectomy is required for injuries to the body, neck, and tail of the pancreas, as well as suspicion or direct proof of pancreatic duct disruption. Even if there is a suspected pancreatic duct injury, similar injuries to the head of the pancreas are best handled with simple external drainage. Pancreaticoduodenectomy should be used only when the head of the pancreas has been severely injured and only as a last resort. The majority of problems should be managed with a mix of feeding at first, percutaneous drainage and endoscopic stenting. [2].

ACUTE PANCREATITIS

Acute pancreatitis is becoming more widespread around the world, and it is one of the most common gastrointestinal reasons for hospitalization in the United States. Significant progress has been made in our understanding of the pathophysiological underpinnings of acute pancreatitis over the last decade. Calcium-mediated acinar cell damage and death have been studied, as well as the role of store-operated calcium entry channels and mitochondrial permeability transition pores. The cytoprotective effect of the unfolded protein response and autophagy in preventing endoplasmic reticulum stress, apoptosis, and necrosis, as well as the major role of unsaturated fatty acids in inducing pancreatic organ failure, have also been studied [3].

The identification of possible molecular targets for future treatment trials has resulted from the

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characterization of these pathways. At the patient level, two classification systems have been developed to group the severity of acute pancreatitis into prognostically meaningful groups, and several landmark clinical trials have informed management strategies in areas such as nutritional support and interventions for infected pancreatic necrosis, resulting in significant shifts in acute pancreatitis management paradigms. We present an overview of current achievements in acute pancreatitis in this Review, with a focus on pathophysiological processes and clinical care of the condition [3].

The degree and location of parenchymal injury, the integrity of the major pancreatic duct, and the concomitant injuries to other organs all influence pancreatic trauma treatment. The involvement of the major pancreatic duct, however, is the most important predictor of the outcome. Medical treatment (parenteral nutrition, antimicrobial therapy, and somatostatin analogues) is used to treat the majority of pancreatic traumas, as well as haemostasis, debridement of devitalized tissue, and closed external

drainage. Endoscopic transpapillary stent insertion can be a viable option if a proximal duct injury is found, although surgical resection via pancreaticoduodenectomy is limited to a very small number of instances [4].

CONCLUSION

Pancreatic injuries are difficult to treat and may necessitate a multidisciplinary approach. We offer a management method based on parenchymal damage and the location of duct injury in this paper.

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