EFFICACY OF PERCUTANEOUS DRAINAGE IN APPROPRIATELY SELECTED NECROTIZING PANCREATITIS PATIENTS.

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DISCLOSURE

- No financial disclosures.

PURPOSE

- The purpose of the study is to select & access the effectiveness of CT Guided PCD in patients with pancreatitis according to the Imaging severity (Modified CT Severity Index).

INTRODUCTION

- Pancreatitis is inflammation of the pancreas accompanied by systemic inflammatory response, multisystem organ failure and necrosis with acute necrotizing pancreatitis accounts for 10-15% of all cases of acute pancreatitis. The necrosis can be infective and non-infective.
- Multiple clinical and radiological criteria grade the severity of acute pancreatitis but the accurate prediction of outcome and treatment is still difficult, as with grading systems we cannot predict if the patient with acute severe pancreatitis will respond to or be refractory to standard medical or interventional radiology care or surgical care.
- There is increased infection risk as the duration of disease increase, with maximum incidence in 3rd week of 71%.

MATERIALS AND METHODS

- The study performed from January 2011 to January 2016. There were 119 consecutive patients (98 men and 21 women; median age 39 years) with necrotizing pancreatitis who underwent percutaneous catheter drainage via CT guidance and were evaluated according to the clinical criteria, radiological scores, drainage and catheter characteristics and complications.

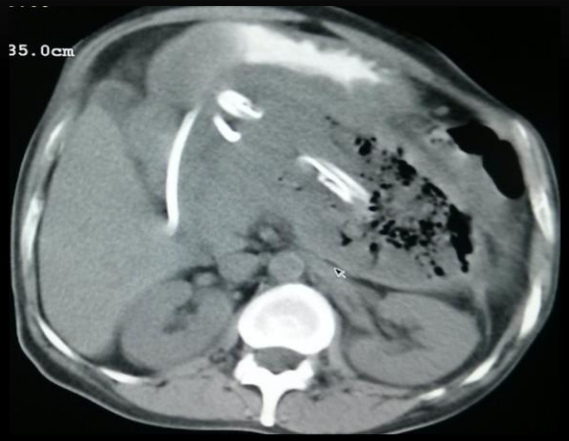
- A retrospective review of our cross-sectional interventional radiology database over 60 months (5 years) identified all patients who underwent primary CT-guided percutaneous drainage for acute necrotizing pancreatitis.

- The Seldinger technique was systematically used to place a catheter in each of the necrotic collections via the most direct transperitoneal route, avoiding intervening bowels and solid organs.

- One or more multihole double-sump 14 to 16 French catheters were placed to aspirate the cavity fluid and to start a continuous irrigation with 1 L/drain/day of normal saline. Later the new larger catheter was inserted after sequential dilation. The goal to increase the diameter of the catheter to a maximum of 28–32 French large-bore catheters whose distal holes were expanded manually (Sherwood, Argyle) and additional holes made where ever required.

- As for the initial drainage, continuous and abundant daily irrigation was initiated, ranging from 0.5 to 1.5 L/drain/day of normal saline, depending on the size of the collection.

- The decision to remove the catheters and stop the drainage was based on clinical improvement (i.e., control of the sepsis and hemodynamic stability), resolution of the necrotic cavity on CT scan and when the amount of drain fluid was less than 20 mL/day.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RESULTS

- The successful drainage procedure outcome was achieved in 103 of 119 patients (86.5%). Of the remaining 16 patients 13 patients had treatment failure on PCD then surgery was performed and 3 patients did not respond to PCD or surgery and died.
- The procedure-related complications were observed in six patients; hemorrhage in one, Pancreatico-cutaneous fistula in five, of which none was lethal and were managed conservatively.
- The mean time between attack of pancreatitis and the first interventional procedure was 25 days (range, 12-65 days).
- It's preferable to upsize the catheters to large bore catheters as it helps in better drainage of the necrosis and moreover, most small bore catheters get clogged easily.
- Regular irrigation of the collection cavity with normal saline helped in improved recovery and reduced hospital stay.

RESULTS	
• Organ failure	45
• Average collection size	397 cc
• Sterile/infected	27 sterile and 92 infected
• CT severity index	8
• Average time to PCD	25.5 days
• Average days on PCD	26.4 days
• Surgery required	27 patients
• Interval in PCD and surgery	31.5 days
• Death	2 patients
• Hospital stay	18.4 days
• Outcomes	
• Average number of procedures per patient	2.4
• Total number of procedures	268
• Total number of catheters used	254
• Complications	6
• Average size of catheters	26 G
• Average number of catheters per patient	2

CONCLUSION

- PCD is a safe and effective technique to treat appropriately selected symptomatic acute necrotizing pancreatitis based on the Modified CT Severity Index.

- Overall, sepsis was controlled in 74% of patients, permitting elective surgery for treatment of pancreatic fistula, and 47% of patients were cured with no surgery required. No catheter-related complications occurred.

- Radiologists and the referring physicians must be committed in treating these patients. The patient, the referring physician, and the radiologist must also be ready to handle the number of catheters, the number of catheter changes, the number of CT scans, and the duration of drainage.

- Another observation in patients with organ failure due to pancreatitis where the CT scan is showing diffuse peripancreatic inflammation involving the intraperitoneal peripancreatic fat, with low Modified CT Severity Index; had a poor prognosis.

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THANK YOU

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