

STUDY OF ENDOVASCULAR MANAGEMENT OF PANCREATITIS RELATED PSEUDOANEURYSM

Radio-Diagnosis

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ABSTRACT

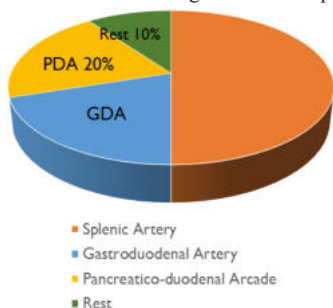
Background & Methods: The aim of the study is to ENDOVASCULAR MANAGEMENT OF PANCREATITIS RELATED PSEUDOANEURYSM. **Results:** 13 patients with a mean age of 45 years were included in this study. Splenic artery (38.48%) was the most commonly involved vessel. Gastroduodenal, superior mesenteric, left gastric, and pancreaticoduodenal arteries were less commonly involved vessels. Embolization was performed using glue (NBCA) in 7 patients (53.8%), coils in 3 patients (23.0%), both coil and glue in 1 patient (7.6%), stent graft placement in 1 patient (7.6%) and direct glue injection in 1 patient (7.6%). Technical success was achieved in 100% (n = 13) patients and clinical success in 92% (n = 12) of patients. **Conclusion:** The findings of the study revealed that technical success was achieved in 100% (n = 13) patients and clinical success in 92% (n = 12) of patients.

KEYWORDS

Pancreatitis, diagnosed, pseudoaneurysm, endovascular.

INTRODUCTION

- The vascular complications are more common in patients with chronic pancreatitis than acute pancreatitis
- Arterial hemorrhages due to pseudoaneurysms are life threatening complications of pancreatitis.
- M.C. involved vessel according to literature : splenic artery

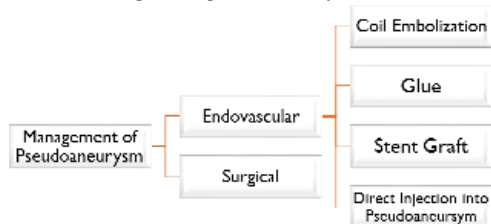


Pathogenesis Of Pseudoaneurysm Formation

Inflammation lead to release of pancreatic autoenzymes and cytokines which causes vessel wall weakening and erosions ultimately leading to disruption of vessel wall and Pseudoaneurysm formation .

Imaging

- Plain CT scan may be done to show haemorrhage (high density area) in collection.
- CT angiography (from dome of diaphragm to iliac crest) should be done in all cases where there is gastrointestinal bleed, hypotension or drop in haemoglobin. Both arterial and venous phases are needed.
- Angiography images show a variable sized smooth or irregular contrast filled outpouching from an artery or its branch



Aims & Objectives

Aim:

To assess the role of endovascular management of pseudoaneurysms caused as a complication of pancreatitis

Objective:

To assess the outcomes of endovascular management of pseudoaneurysms caused as a complication of pancreatitis.

MATERIAL & METHOD

- Patients demographics, clinical presentation, laboratory findings angiography findings, details of endovascular procedure, technical outcome, clinical outcome were assessed.
- Computed tomography (CT) angiography was performed using a 64 slice multidetector CT scanner (GE) in all cases
- Angiography was performed on a digital subtraction angiography system (Optima IGS 320). Angiography and endovascular interventions were performed through a right common femoral arterial approach or brachial artery approach. The celiac artery, superior mesenteric artery (SMA), and inferior mesenteric artery were catheterized using 5 fr diagnostic catheter and selective angiography performed. Super-selective catheterization of the common hepatic artery, Gastroduodenal artery, left gastric artery, and splenic artery were performed with 2.8 fr microcatheter.
- Angiography images were reviewed for the presence of pseudoaneurysm, contrast extravasation, and vessel wall irregularity
- The vascular abnormalities were treated either by embolization or by stent graft placement. Embolization was performed with coils of varying size or n-butyl cyano-acrylate (n-BCA) glue
- Angiography was repeated at the end of the procedure in all cases

Study Center: A tertiary care center (Amaltes Institute of medical science, Dewas, M. P. India) at Radiodiagnosis Department

Study Design: Retrospective study

Duration Of Study: 5 years

Sample Size : 13

Patient selection

Inclusion criteria :

- All patients who underwent endovascular management for pseudoaneurysm related to pancreatitis.

Exclusion Criteria :

- Patients who underwent surgical management for pseudoaneurysm related to pancreatitis

RESULTS

- 13 patients with a mean age of 45 years were included in this study. Splenic artery (38.48%) was the most commonly involved vessel.
- Gastroduodenal, superior mesenteric, left gastric, and pancreaticoduodenal arteries were less commonly involved vessels.
- Embolization was performed using glue (NBCA) in 7 patients (53.8%), coils in 3 patients (23.0%), both coil and glue in 1 patient

(7.6%) , stent graft placement in 1 patient (7.6%) and direct glue injection in 1 patient (7.6%).

- Technical success was achieved in 100%(n = 13) patients and clinical success in 92%(n = 12) of patients.

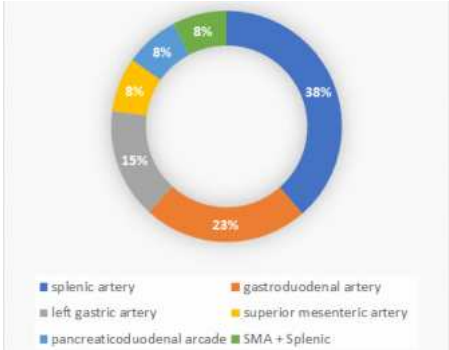
One patient had Post op complication (Rebleeding).

Demography

Number of patients	13
Male : Female	7:1
Mean age	45 years
Etiology	
Acute pancreatitis	3
Chronic pancreatitis	10

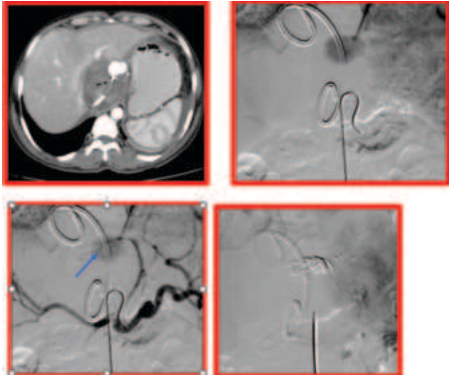
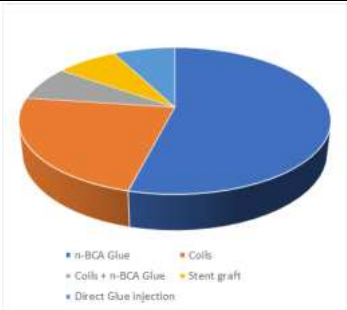
Arteries Involved In Our Study Are Summarized As Follows:

Vessel involved	Number of cases
Splenic artery	5(38.48 %)
Gastroduodenal artery	3 (23.07%)
Left Gastric Artery	2(15.38%)
Superior Mesenteric artery	1(7.6%)
Pancreaticoduodenal arcade	1(7.6%)
SMA + Splenic	1(7.6%)



Details Of Endovascular Procedure And Outcomes:

Endovascular Intervention	No. of patients
n-BCA Glue	7(53.8%)
Coils	3 (23.0%)
Coils + n-BCA Glue	1 (7.6%)
Stent graft	1 (7.6%)
Direct Glue injection	1 (7.6%)
Outcome	No. of patients
Technical success	100% (13)
Clinical success	92.5 %(12)



41 year old male with acute pancreatitis and hematemesis LGA involved, managed with glue (n-BCA)

DISCUSSION & CONCLUSION

- Conventional angiography has been used to evaluate pancreatitis related vascular complications.
- As reported in literature, our study too had splenic artery as the most commonly involved vessel. The less commonly involved vessels include gastroduodenal, left gastric, superior mesenteric and pancreaticoduodenal arteries.
- Trans-arterial embolization is considered as the initial choice of treatment.
- Hence we conclude that Endovascular management is safe and effective and is associated with good outcomes, but careful follow-up is necessary. A high technical and clinical success with low rebleeding rates in this study provide further support for endovascular therapy in pancreatitis related hemorrhage.

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