



ORIGINAL RESEARCH PAPER

Surgery

PANCREATIC COLLECTION: ACUTE NECROTIC COLLECTION - NO DRAINAGE OR PERCUTANEOUS DRAINAGE?

KEY WORDS: Acute Necrotising Pancreatitis. Pancreatic Collection. Conservative Management. Percutaneous Drainage.

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ABSTRACT

Acute Pancreatic Necrotic Collections Are Defined As The Collection With Less Than 4 Weeks From Onset, Heterogenous And Non-liquid Density, No Definite Wall Encapsulating The Collection, May Be Intrapancreatic Or Extra Pancreatic—according To 2012 Revised Atlanta Classification. When Gas Bubbles Are Detected In Collections, Caused By Gas Forming Organisms With Or Without Fistulization To Gi Tract, Infection Of Necrosis Is Considered Proven. Aim Is To Evaluate The Better Method For Bridging To Surgery In Acute Infected Necrotic Pancreatic Collection: Conservative Or Percutaneous Drainage?

Study Is Conducted In Department Of General Surgery In Tertiary Care Hospital For Six Months. 20 Patients Are Included With The CECT Diagnosis Of Acute Infected Necrotic Pancreatic Collection. We Have Studied Patient's Symptoms, GCS And Apache II Score After 24 Hours; Considered Any Pancreatitis Related Complications Occurring Within 7 Days; Mortality While Waiting For The Surgery; And Whether Final Surgery Needed Or Not.

Reviewing The Data Suggests The Better Outcome Of The Patients When They Are Managed With Percutaneous Drainage.

INTRODUCTION

Acute Pancreatitis Is Sudden Inflammation Of Pancreas. Necrosis Constitute Pathophysiological Product Of Pancreatitis Leading To Acute Pancreatic Necrotic Collections. However, They May Be Sterile And Have A Better Prognosis. Prognosis Worsens When Infection Occurs Within Such Collections.

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Traditionally, Laparotomy With Necrosectomy Was Performed In Such Cases. However, Morbidity And Mortality Being Very High, Era Of Conservative Management Have Set In. In The Last Decade, Many Studies Showed The Conservative Management With Antibiotics And Supportive Measures Being The Preferred Method In Acute Settings Which Was Then Followed By Surgery When The Patient Is Stabilised.

We Here Are To Discuss About This Waiting Period; Whether To Wait With Conservative Management Only, Or While Actively Draining The Collection Percutaneously?

AIM

To Evaluate The Better Method For Bridging To Surgery In Acute Infected Necrotic Pancreatic Collection: Conservative Or Percutaneous Drainage?

OBJECTIVES

Compare The General Condition Of The Patient While On Conservative Management And Percutaneous Drainage.

Compare The Mortality Rates In Case Of Conservative Management With Percutaneous Drainage.

Compare The Progression Of Disease While On Conservative Management With Percutaneous Drainage.

Compare The Complication Rate In Patients While On Conservative Management With Percutaneous Drainage.

MATERIALS AND METHODOLOGY

Study is Conducted In Department Of General Surgery In Tertiary Care Hospital For Six Months. It Is A Retrospective, Observational Study. Study Duration: August 2019 To February 2020. 20 Patients Are Included With The CECT Diagnosis Of Acute Infected Necrotic Pancreatic Collection.

Limitations Of Study

Study Is Single Centre Study With Small Sample Size. Thus, Results Are Prone To Type II Error.

Study Observed Short Term Followup, This May Not Be Adequate For Longer Term Morbidity And Mortality Considerations.

DISCUSSION

This Study Involves 20 Patients Having Acute Infected Necrotic Collection In Pancreas As Per CECT Findings. All These Patients Have CTSI Grade 8-10, GCS 12-15, Apache II Score >8, No Medical Comorbidities And Cause Of Pancreatitis Being Alcoholism On Admission.

10 Of These Patients Are Managed Conservatively And Rest 10 Drained Percutaneously While Waiting For The Final Surgery.

We Have Studied Patient's Symptoms, GCS And Apache II Score After 24 Hours; Considered Any Pancreatitis Related Complications Occurring Within 7 Days; Mortality While Waiting For The Surgery; And Whether Final Surgery Needed Or Not.

Symptoms Of Patients Being, Most Commonly, Abdominal Pain, Nausea, Vomiting, Fever.

Conservative Management Protocol Involves:

- General Condition Assessment
- Keep Patient Nbm
- Iv Fluids
- Iv Nutrition
- Ng Tube Insertion

- Antibiotics: Most Commonly Considered Being Cephalosporins With Or Without Metronidazole
- Subcutaneous Octreotide 100 Microns Od
- Appropriate General Condition Followup Sos Resuscitation
- RBS Scaling And Adequate Blood Sugar Management

Percutaneous Drainage Protocol Includes:

- Follow Conservative Management Steps
- Radiology Guided Location Of Collection
- Percutaneous Insertion Of 32 French Drainage Catheter Under Local Anaesthesia With Full Aseptic Precautions And After Proper Consent.
- Once Or Twice Daily Drainage Via Catheter

- Replenish The Fluid Loss Iv
- Proper Sterile Dressing Regularly
- Regular Radiological Followup To Check The Collection Characteristics

Complications Considered Include:

- Systemic Inflammatory Response Syndrome
- Systemic Organ Failure
- Drain Site Related Complications

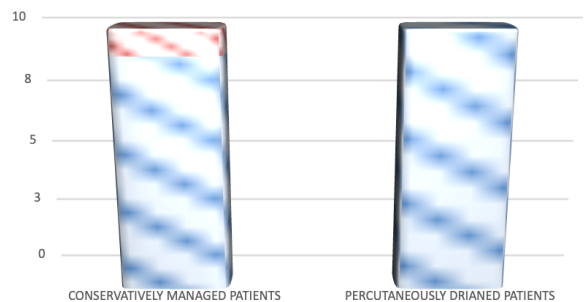
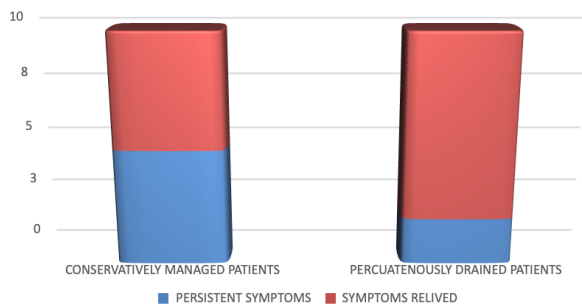
RESULTS

The Patients Considered On Admission Are As Mentioned Above. Patients Are Followed Up After 24 Hours And After 1 Week. The Findings Are As Below:

		Conservatively Managed	Percutaneously Drained	Significance
After 24 Hours	Symptoms Relieved In	5	8	Symptomatic Recovery In The Waiting Period Is An Important Factor. Once The Collection Is Drained, The Symptom Relief Is Better Because Of The Reduction In Size Of Collection Causing Less Compressive Symptoms.
	Patients With GCS Reduction By 1 Point Or More Compared To Admission	3	1	GCS Reduction Shows The Worsening Of Overall Condition Showing Progression Of Disease
	Patients With Improved Apache II Score Compared To Admission Data	4	9	Improvement In The Score Shows Overall Condition Of The Patient And The Data Definitely Shows Better Count With The Drained Patients
Within 1 Week	Patients Developing Complications (as Mentioned Above)	7	4	Among The Conservatively Managed Patients The Complications Were Mostly Related To The SIRS And MODS; While Of The Drained Patients, The Drain Site Complications Were In Majority. Hence The Complications With Conservatively Managed Patients Were Life Threatening And Making It To Be Less Preferred Option For Waiting Period
	Mortality	1	0	The Reported Death Was Due To MODS
	Patients With Surgery Planned Later On According To The Requirement	9	7	Figure Shows That All Conservatively Managed Patients Needed Surgery Later On However, In Drained Patients, Due To Reduced Size And Relieved Symptoms, The Need Of Surgery Can Be Alleviated (in Some Cases).

SYMPTOM RELIEF COMPARISON

COMPARISON OF MORTALITY



Reviewing The Data Suggests The Better Outcome Of The Patients When They Are Managed With Percutaneous Drainage.

CONCLUSION

Though Doing Nothing (antibiotics And Conservative Management) Has Been The Standard To Bridge The Gap Till

Patient Becomes Fit For Surgery, Our Study Shows Better Outcome Of Patients With Infected Necrotic Pancreatic Collection When Drained Percutaneously As A Bridge. It Reduces The Overall Waiting Period, Improves Prognosis Of Patient, Reduces Mortality Rate And At Times, Averts The Need Of Final Surgery. However, These Findings Need To Be Confirmed With Larger Studies.