



Predictors of Need of Surgery in Patients with Acute Necrotic Collections Treated with Percutaneous Drainage

ABSTRACT NO :

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INTRODUCTION:

- ❖ Patients with acute pancreatitis with acute necrotic collections can be managed conservatively or with drainage
- ❖ Drainage can be performed endoscopically, or with percutaneous drainage (PCD) or with surgical methods
- ❖ Percutaneous drainage is an important initial step in the step-up strategy for management of acute necrotic collections
- ❖ PCD alone has high failure rate necessitating additional surgical necrosectomy
- ❖ Delaying necrosectomy can adversely affect morbidity & mortality.
- ❖ Early identification of predictors of failure of PCD can help make timely management decisions

OBJECTIVE:

- ❖ To study prospectively study factors causing failure of percutaneous drainage in patients with acute necrotic collections

METHODS:

- ❖ Setting: Tertiary care center in North India (PGIMER, Chandigarh).
- ❖ Study design: Single center prospective study OF 21 patients
- ❖ Duration of study: July 2019 to July 2021

PATIENT CHARACTERISTICS

Mean age	36.05 ± 12.85 years
Males	13/21 (61.9%)
Females	8/21 (38.09%)
Moderately severe disease	9/21 (9.52%)
Severe disease	12/21 (90.48%)

PATIENT CHARACTERISTICS

ETIOLOGY OF PANCREATITIS	Frequency	Percentage
Alcohol	10/21	47.6%
GSD	6/21	28.6%
Alcohol + GSD	4/21	19%
Post ERCP Pancreatitis	1/21	4.8%
OUTCOME BASED GROUPS		
A: Discharged with PCD (PCD SUCCESS)	9/21	9.52%
B: Necrosectomy despite PCD (PCD FAILURE)	12/21	90.48%

COMPARISON BETWEEN THE GROUPS

	Group A	Group B	P value
Male gender	3/9 (33.3%)	10/12 (83.3%)	0.03
Alcohol as etiology	4/9 (44.44%)	6/12 (50%)	0.16
Mean BMI in kg/m ²	24.5	22.4	0.21
Mean Ferritin levels in ng/mL	1033.4	2916.9	0.39

COMPARISON BETWEEN THE GROUPS-PATIENT CHARACTERISTICS

	Group A	Group B	P value
Corrected calcium levels in gm/dL	9.0 ± 0.3	8.3 ± 1.2	0.07
Vit D levels in ng/mL	11.9 ± 5.5	14.5 ± 11.1	0.97
qCRP in mg/L	209.6 ± 95.9	249.5 ± 107.1	0.51S
SIRS at admission	2.33 ± 0.50	2.92 ± 1.00	0.10
SIRS at 48hours	2.89 ± 0.93	3.50 ± 0.52	0.12
MMS at admission	1.4 ± 0.9	1.7 ± 1.8	0.70
APACHE score at admission	7.0 ± 3.0	7.8 ± 8.0	0.51

COMPARISON BETWEEN THE GROUPS-PCD CHARACTERISTICS

	Group A	Group B	P value
Day of placement	15.1 ± 4.9	20.5 ± 3.9	0.02
Initial PCD size in French scale	11.8 ± 1.9	11.7 ± 1.9	0.92
Widest PCD size in French scale	16.2 ± 3.1	14.7 ± 4.2	0.28

DISCUSSION:

- ❖ Age and sex distribution of patients & etiological profile of pancreatitis was similar to other Indian studies by Bellam et al. & Babu et al.
- ❖ Alcohol related AP had higher chances of failure of PCD in our study while in study by Babu et al. GSD was found to have higher chances of PCD failure
- ❖ Male sex and BMI, hypocalcemia, qCRP levels were important factors affecting the success of percutaneous drainage in our study
- ❖ Clinical scores too (SIRS, MMS, APACHE) have significant value to predict failure of PCD
- ❖ Delayed placement of percutaneous drain was associated with higher chance of clinical failure while larger size of PCD improved success of PCD

CONCLUSION:

Male gender & timing of PCD have significant effect on outcome of AP patients with ANCs. Clinical, biochemical, radiological & PCD related parameters can have significant impact on success of

