$\Delta C C \sim 2022$

Early Versus Delayed Minimally Invasive Intervention for Infected Pancreatic Necrosis – A Systematic Review and Meta-Analysis

Introduction

- Pancreatic necrosis complicates about 20% of acut pancreatitis cases, and 30-40% of those become infected
- Current guidelines recommend that invasive interventio for pancreatic necrosis should be delayed to 4 or mor weeks from disease onset

Methods

- Comprehensive search in the literature for studies that evaluated early vs. delayed minimally invasive intervention for infected pancreatic necrosis
- Searched the databases of PubMed/MEDLINE an Embase from inception until April 11, 2022
- Early intervention was within 4 weeks of acute pancreatit onset, while delayed intervention was after 4 weeks
- Outcomes were mortality, gastrointestinal fistula perforation, bleeding, and length of hospital stay
- Random-effects model was used to calculate the mea differences (MD), risk ratios (RR), and confidence interval (CI)

Results and Discussion

- 7 studies were included with a total of 742 patients
- Timing of intervention had no effect on mortality bleeding in infected pancreatic necrosis
- Early intervention resulted in higher risk of gastrointestin fistula or perforation and longer length of hospital stay
- Further randomized controlled trials are needed to confirm our findings

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Forest Plots



	Early Interve	ention	Late Interv	ention		Risk Ratio		
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% Cl		
Boxhoom 2021	8	55	10	49	20.6%	0.71 [0.31, 1.66]		
Chantarojanasiri 2018	3	12	0	23	5.2%	12.92 [0.72, 231.44]		
Jagielski 2022	4	25	6	46	16.5%	1.23 [0.38, 3.94]		
Rana 2021	7	34	2	136	12.7%	14.00 [3.04, 64.39]		
Trikudanathan 2018	8	76	12	117	20.6%	1.03 [0.44, 2.39]		
Zhang 2021	35	100	11	31	24.5%	0.99 [0.57, 1.70]		
Total (95% CI)		302		402	100.0%	1.54 [0.74, 3.21]		
Total events	65		41					
Heterogeneity: Tau ² = 0.49; Chi ² = 14.97, df = 5 (P = 0.01); l ² = 67%								
Test for overall effect: Z = 1.17 (P = 0.24)								Favors E

Bleeding



	Early II	nterven	tion	Late Intervention			Mean Difference			
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% Cl		
Boxhoom 2021	59	37	55	51	43.5	49	20.6%	8.00 [-7.62, 23.62]		
Chantarojanasiri 2018	27.5	13.3	12	31	64	23	10.0%	-3.50 [-30.72, 23.72]		
Oblizajek 2020	26	9.5	19	6	10	19	36.7%	20.00 [13.80, 26.20]		
Trikudanathan 2018	37	25.2	76	26	153.3	117	9.4%	11.00 [-17.35, 39.35]		
Zhang 2021	42.5	32.7	100	40	34.8	31	23.2%	2.50 [-11.33, 16.33]		
Total (95% Cl) 262						239	100.0%	10.25 [0.41, 20.10]		
Heterogeneity: Tau [*] = 58.79; Chi [*] = 8.26, df = 4 (P = 0.08); l [*] = 52%									-50	
Test for overall effect: $z = 2.04$ ($P = 0.04$)									Favors	

Length of hospital stay

References

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