

Post-ERCP Pancreatitis: Does Diet Really Matter?

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INTRODUCTION

Pancreatitis is one of the potential complications after an ERCP, with an incidence of 9.7% and a mortality of 0.7%. Several factors are known to be associated with the development of post-ERCP pancreatitis including a prior history of pancreatitis, difficult cannulation, and Grade 3 procedural interventions, however, the relationship between post-ERCP diet and development of pancreatitis is not well understood.

Hypothesis: We theorized that a regular consistency low fat diet immediately after an ERCP would not have an association with the development of post-ERCP pancreatitis.

METHODS

Study Type:

Retrospective multicenter study involving two academic medical centers of patients who underwent ERCP in 2021

Inclusion Criteria:

1. Patients \geq 18 years old
2. In-patient status prior to ERCP
3. No prior history of ERCP
4. No prior history of pancreatitis
5. No Prior history of Sphincter of Oddi Dysfunction

Variables:

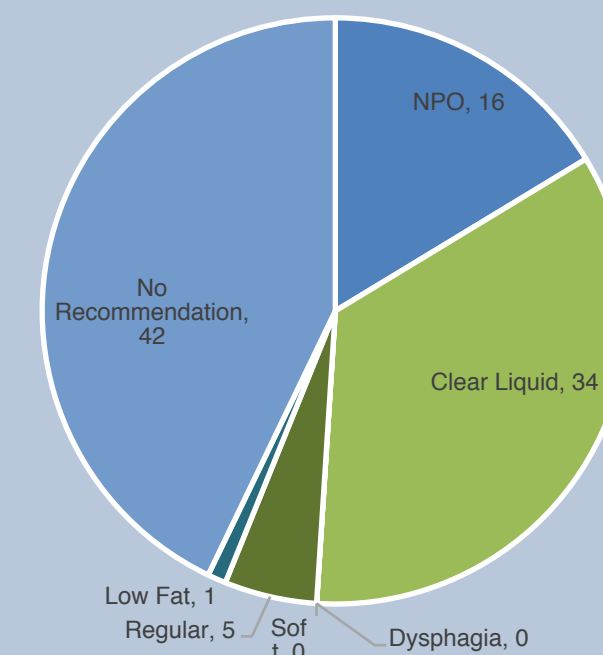
1. Demographics
2. ERCP indications, interventions, intra-procedural complications
3. Pre and post ERCP diet (as recommended by endoscopist)
4. Post-procedure complications including pancreatitis

Data Analysis

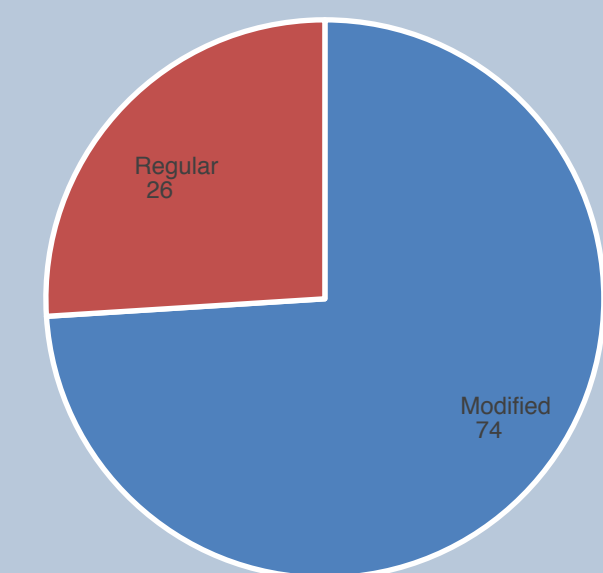
Variables compared using X2 and Fisher's exact tests

RESULTS

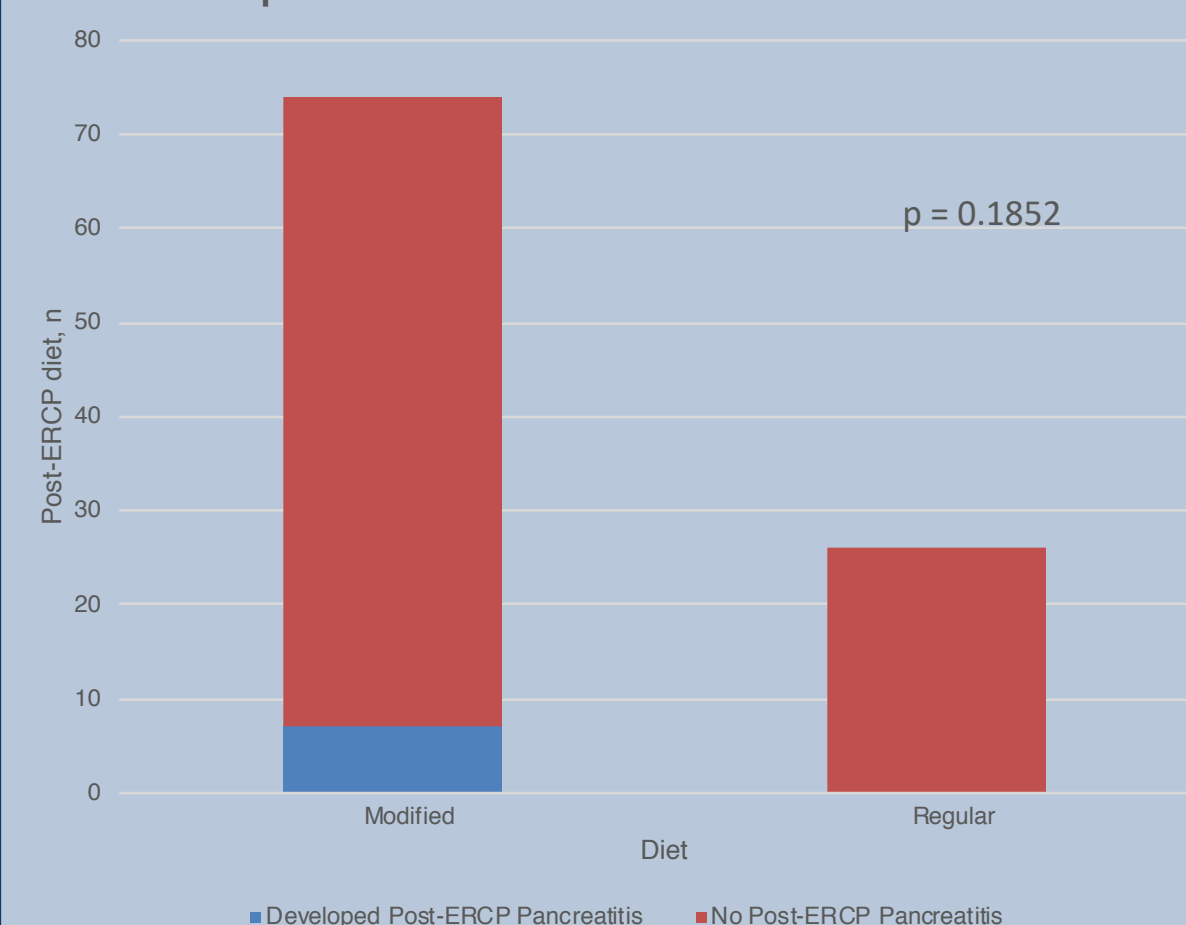
Diets Recommended by Endoscopists



Post-ERCP Diet



Development of Post-ERCP Pancreatitis Based on Diet



Patient and ERCP Characteristics

| | Post-ERCP pancreatitis | | p-value |
|--|------------------------|-----------------|---------------|
| | Yes | No | |
| Main exposure | | | |
| Post-ERCP diet, n (%) | | | 0.1852 |
| Modified | 7 (9.46) | 67 (90.54) | |
| Regular | 0 (0.00) | 26 (100.00) | |
| Demographic characteristics | | | |
| Sex, n (%) | | | 1.0000 |
| Female | 4 (7.27) | 51 (92.73) | |
| Male | 3 (6.67) | 42 (93.33) | |
| Age in years | | | 0.5122 |
| Mean (SD) | 58.29 (21.69) | 63.46 (18.46) | |
| Comorbidities | | | |
| History of pancreatitis, n (%) | | | 1.0000 |
| Yes | 0 (0.00) | 10 (100.00) | |
| No | 7 (7.78) | 83 (92.22) | |
| History of cholelithiasis, n (%) | | | 0.3411 |
| Yes | 0 (0.00) | 19 (100.00) | |
| No | 7 (8.64) | 74 (91.36) | |
| ERCP characteristics | | | |
| Indication, n (%) | | | 0.8308 |
| Benign bile duct pathology | 6 (8.45) | 65 (91.55) | |
| Malignancy | 1 (6.25) | 15 (93.75) | |
| Benign pancreas duct pathology | 0 (0.00) | 13 (100.00) | |
| Cannulation type | | | 0.0116 |
| Standard | 2 (2.78) | 70 (97.22) | |
| Other | 5 (20.00) | 20 (80.00) | |
| Sphincterotomy, n (%) | | | 0.1586 |
| Yes | 4 (5.06) | 75 (94.94) | |
| No | 3 (14.29) | 18 (85.71) | |
| Biliary stent, n (%) | | | 0.1139 |
| Yes | 6 (11.54) | 46 (88.46) | |
| No | 1 (2.08) | 47 (97.92) | |
| Pancreatic stent, n (%) | | | 0.3108 |
| Yes | 2 (12.50) | 14 (87.50) | |
| No | 5 (5.95) | 79 (94.05) | |
| Complexity grade, n (%) | | | 1.0000 |
| Grade 3 | 1 (7.69) | 12 (92.31) | |
| Grade 1-2 | 6 (6.90) | 81 (93.10) | |
| Post-procedure fluid, UNITS (N=81)***, n (%) | | | 0.9525 |
| Mean (SD) | 870.00 (710.28) | 904.45 (778.64) | |
| Rectal indomethacin, n (%) | | | 0.1037 |
| Yes | 7 (9.86) | 64 (90.14) | |
| No | 0 (0.00) | 29 (100.00) | |

CONCLUSIONS

- In cohort of 100 patients, diet type was not associated with the development of post-ERCP pancreatitis
- Non-standard cannulation type (ie precut needle knife sphincterotomy) was significantly associated with post-ERCP pancreatitis, which has been well established previously
- Endoscopists regularly recommend a modified diet post-ERCP despite a lack of evidence in benefit of slowly advancing patient diet
- Immediate initiation of a regular diet may lead to decreased hospital stay, quicker patient recovery, and improving patient satisfaction

FUTURE DIRECTIONS

- Larger scale studies and prospective randomized controlled trials to further evaluate the relationship between diet and development of post-ERCP pancreatitis, as well as assess for additional independent risk factors for post ERCP pancreatitis
- Cost-benefit analysis of post-ERCP diet

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