# Comparison of Preoperative and Post Peroral Pyloromyotomy Symptoms Based on Severity of Preoperative Gastric Emptying Study

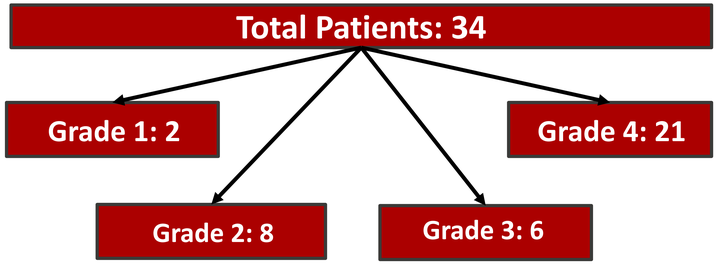
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## Introduction

- Gastroparesis is a challenging disease to treat and peroral pyloromyotomy (POP) has been shown to be an effective treatment method
- Aim: Compare outcomes after POP based on the severity of pre-operative delayed gastric emptying

## Methods

- Retrospective chart review from 2018-2023
- Single tertiary care institution
- Positive delayed gastric emptying: > 10% tracer retained after 4 hours
- Cohorts based on severity of delay:
  - Grade 1: 11-20%, Grade 2: 21-35%, Grade 3: 36-50%, Grade 4: > 50%
- Statistical analysis: Chi squared test, Wilcoxon rank sum test




## Results

**Table 1. Comparison of Preoperative Symptoms**

| | Total | Grade 1 | Grade 2 | Grade 3 | Grade 4 | p-value |
|---|---|---|---|---|---|---|
| | N=37 | N=2 | N=8 | N=6 | N=21 | |
| Dysphagia | 9 (24%) | 0 (0%) | 3 (38%) | 2 (33%) | 4 (19%) | 0.61 |
| Chest Pain | 2 (5%) | 0 (0%) | 0 (0%) | 0 (0%) | 2 (10%) | 1 |
| GERD | 21 (57%) | 1 (50%) | 5 (63%) | 4 (67%) | 11 (52%) | 0.9 |
| Unable to Finish Meal | 4 (11%) | 0 (0%) | 0 (0%) | 0 (0%) | 4 (19%) | 0.57 |
| Nausea | 30 (81%) | 2 (100%) | 6 (75%) | 3 (50%) | 19 (90%) | 0.12 |
| Emesis | 30 (81%) | 2 (100%) | 5 (63%) | 5 (83%) | 18 (86%) | 0.57 |
| Loss of Appetite | 1 (3%) | 0 (0%) | 0 (0%) | 0 (0%) | 1 (5%) | 1 |
| Bloating | 7 (19%) | 1 (50%) | 5 (63%) | 1 (17%) | 0 (0%) | <0.001 |
| Weight Loss | 8 (22%) | 1 (50%) | 1 (13%) | 1 (17%) | 5 (24%) | 0.61 |
| Hematemesis/ Anemia | 1 (3%) | 1 (50%) | 0 (0%) | 0 (0%) | 0 (0%) | 0.054 |
| Pulmonary Symptoms | 3 (8%) | 0 (0%) | 0 (0%) | 1 (17%) | 2 (10%) | 0.61 |
| Odynophagia | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 |

**Table 2. Comparison of 1-month Postoperative Symptoms**

| | Total | Grade 1 | Grade 2 | Grade 3 | Grade 4 | p-value |
|---|---|---|---|---|---|---|
| | N=37 | N=2 | N=8 | N=6 | N=21 | |
| Dysphagia | 1 (3%) | 0 (0%) | 0 (0%) | 1 (17%) | 0 (0%) | 0.22 |
| Chest Pain | 2 (5%) | 0 (0%) | 0 (0%) | 1 (17%) | 1 (5%) | 0.43 |
| GERD | 1 (3%) | 0 (0%) | 0 (0%) | 0 (0%) | 1 (5%) | 1 |
| Unable to Finish Meal | 2 (5%) | 0 (0%) | 1 (13%) | 0 (0%) | 1 (5%) | 0.68 |
| Nausea | 12 (32%) | 1 (50%) | 2 (25%) | 0 (0%) | 9 (43%) | 0.19 |
| Emesis | 7 (19%) | 0 (0%) | 2 (25%) | 0 (0%) | 5 (24%) | 0.68 |
| Loss of Appetite | 2 (5%) | 0 (0%) | 1 (13%) | 0 (0%) | 1 (5%) | 0.68 |
| Bloating | 2 (5%) | 0 (0%) | 2 (25%) | 0 (0%) | 0 (0%) | 0.11 |
| Weight Loss | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 |
| Hematemesis /Anemia | 1 (3%) | 0 (0%) | 0 (0%) | 0 (0%) | 1 (5%) | 1 |
| Pulmonary Symptoms | 1 (3%) | 0 (0%) | 0 (0%) | 0 (0%) | 1 (5%) | 1 |
| Odynophagia | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 |

**Table 3. Comparison of 6-month Postoperative Symptoms**

| | Total | Grade 1 | Grade 2 | Grade 3 | Grade 4 | p-value |
|---|---|---|---|---|---|---|
| | N=37 | N=2 | N=8 | N=6 | N=21 | |
| Dysphagia | 3 (8%) | 0 (0%) | 1 (13%) | 1 (17%) | 1 (5%) | 0.45 |
| Chest Pain | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 |
| GERD | 1 (3%) | 0 (0%) | 0 (0%) | 0 (0%) | 1 (5%) | 1 |
| Unable to Finish Meal | 2 (5%) | 0 (0%) | 2 (25%) | 0 (0%) | 0 (0%) | 0.11 |
| Nausea | 8 (22%) | 1 (50%) | 3 (38%) | 0 (0%) | 4 (19%) | 0.21 |
| Emesis | 6 (16%) | 1 (50%) | 1 (13%) | 0 (0%) | 4 (19%) | 0.46 |
| Loss of Appetite | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 |
| Bloating | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 |
| Weight Loss | 4 (11%) | 0 (0%) | 2 (25%) | 0 (0%) | 2 (10%) | 0.47 |
| Hematemesis /Anemia | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 |
| Pulmonary Symptoms | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 |
| Odynophagia | 1 (3%) | 0 (0%) | 0 (0%) | 1 (17%) | 0 (0%) | 0.22 |

## Conclusions

- We found no difference in preoperative, 1-month, and 6-month postoperative symptoms between the different severity of delayed gastric emptying except for preoperative bloating
- All severities of delayed gastric emptying had a similar response to POP which suggests that even patients with severe, Grade 4, gastroparesis will benefit from POP