

BACKGROUND

- We previously suggested a relationship between oral bowel preparation containing sodium sulfate, potassium chloride and magnesium sulfate (OST) and erosive gastritis.
- Based on our prior study, we hypothesized that the potassium chloride component in OST is responsible for erosive changes and reducing contact time with gastric mucosa will decrease incidence of erosive gastritis.
- Changes were made to the instructions from dosing over 15-20 minutes as per package insert (OST-P) to 1 hour, allowing 4-5 minutes delay and increase water intake between tablets (OST-D).

AIMS

- Reduce the incidence and severity of Erosive Gastritis when using OST-D for Bowel preparation.
- Optimize dosing instructions for OST bowel preparation

METHODS

- A retrospective, observational review of patients who had EGD at time of a colonoscopy by single operator from December 12, 2021, to May 3, 2022.
- We compared the incidence of erosive gastritis in patients receiving OST-D versus oral sulfate solution (OSS) and PEG.
- We revised EGD images and classified erosive gastritis into mild (focal superficial erosions), moderate (diffuse superficial erosions), and severe (deep, cratered erosions, with scab).
- We reviewed EGD images from our prior OST study (OST-P) and classified lesions in the same manner. Exclusion criteria included NSAID use and H. pylori infection.

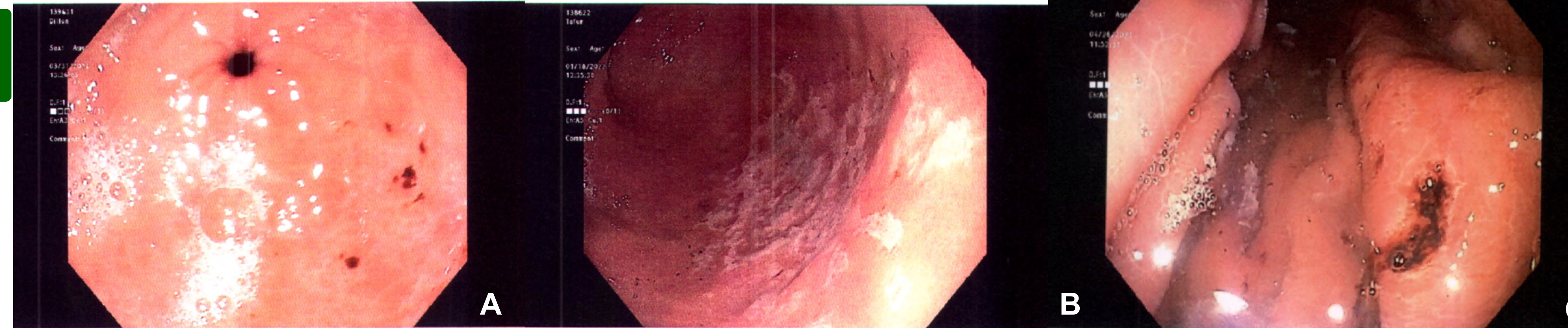
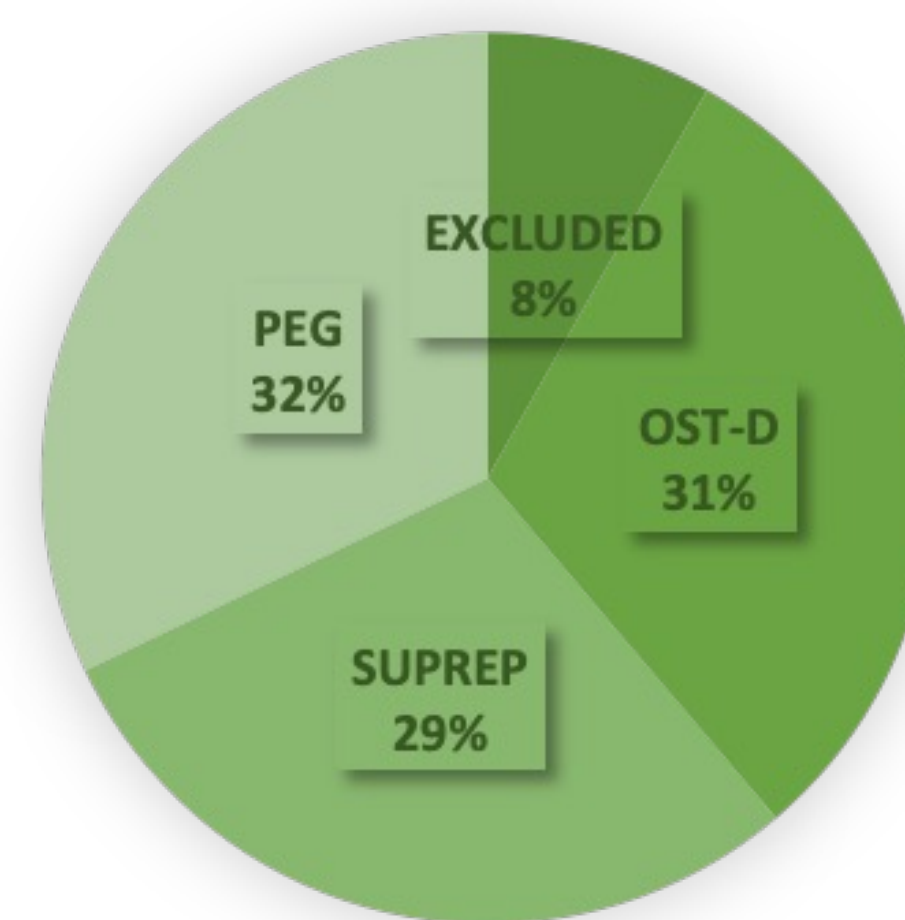
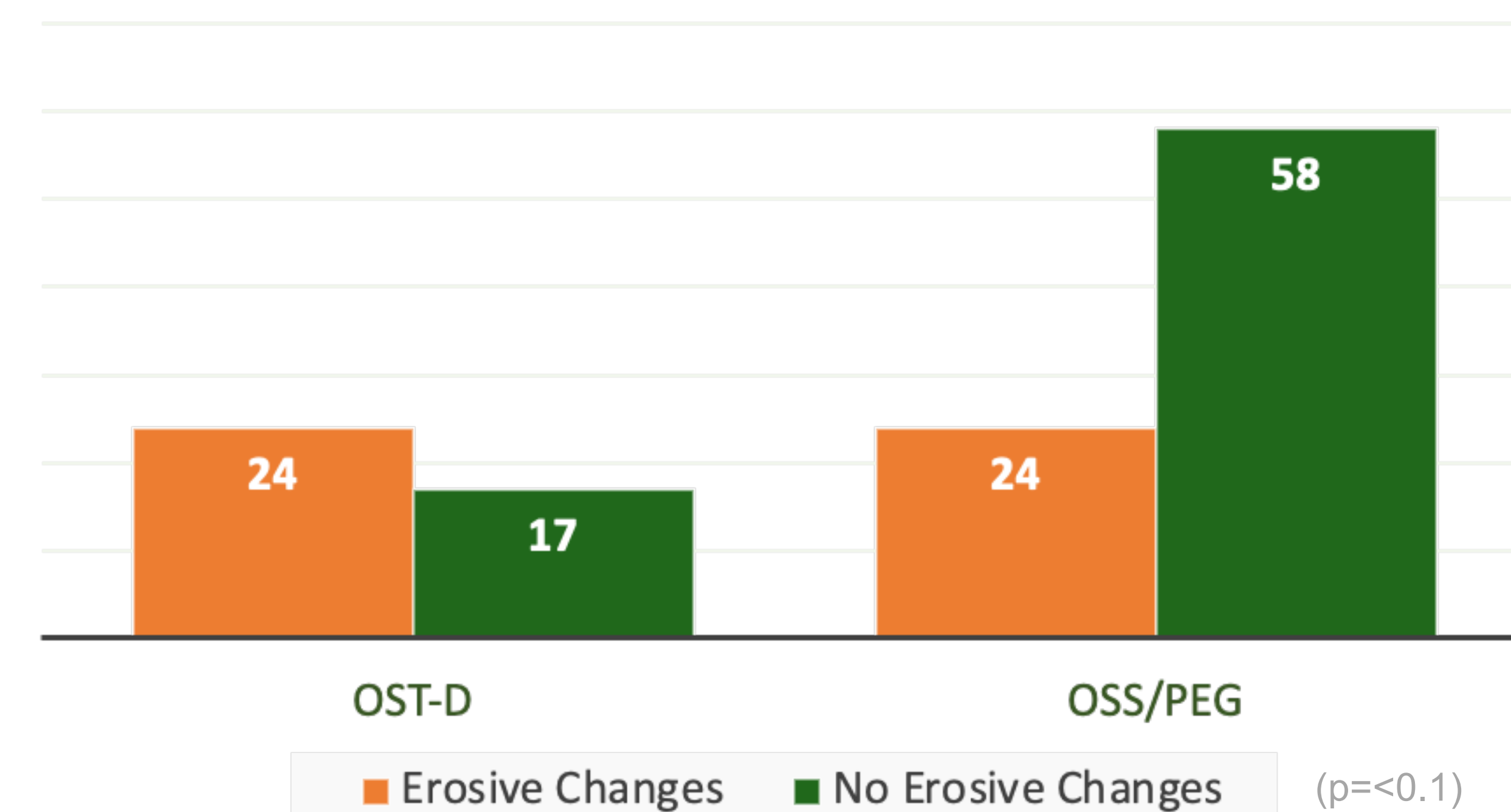


Image A: Mild erosive gastritis in a patient that underwent OST-D for bowel preparation.
Image B: Moderate diffuse erosive gastritis in OST-D. Superficial erosions in gastric mucosa.
Image C: Patient who underwent OST-P. Evidence of deep cratered ulcer in the gastric mucosa. Classified as severe erosive gastritis.

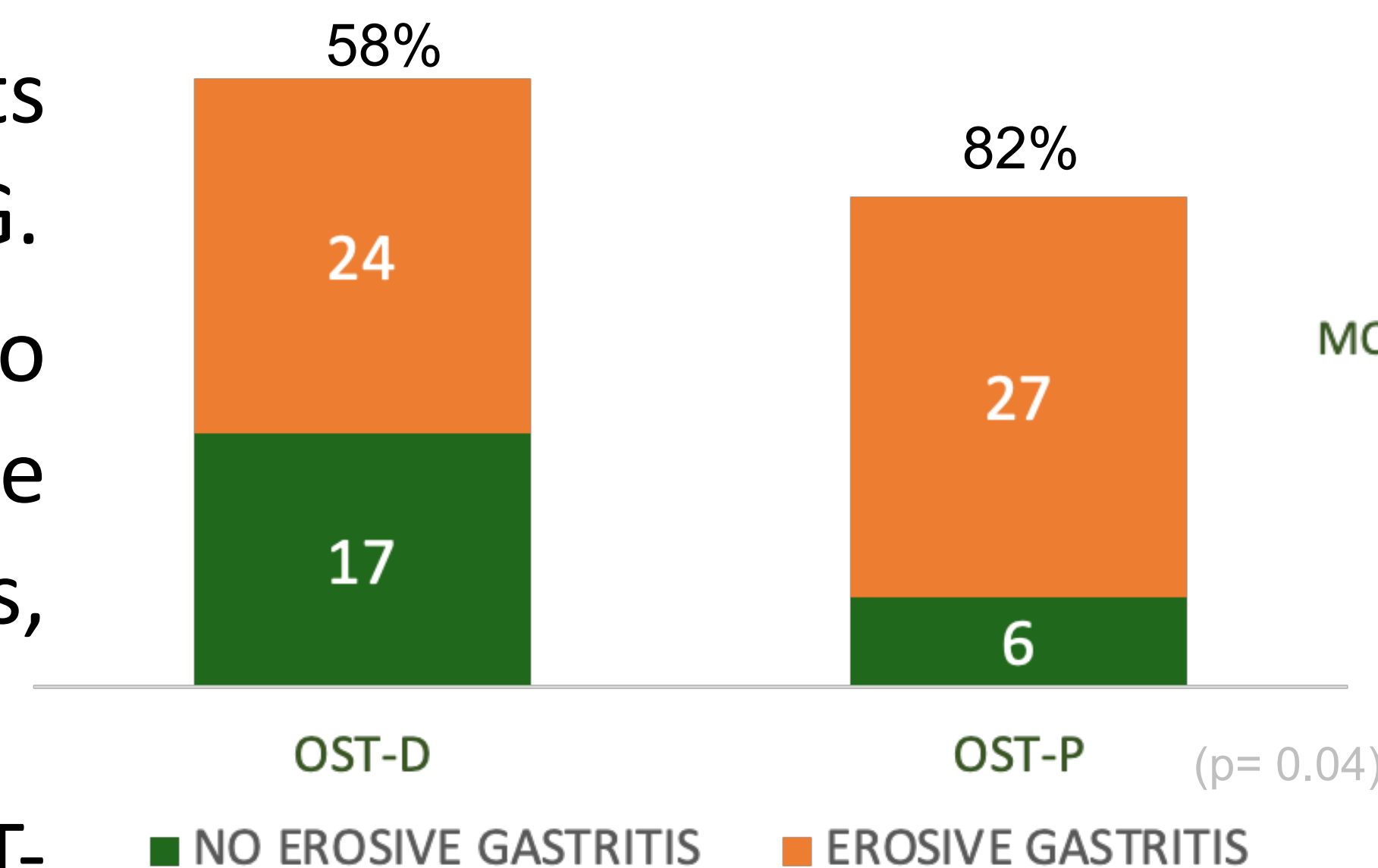
STUDY POPULATION



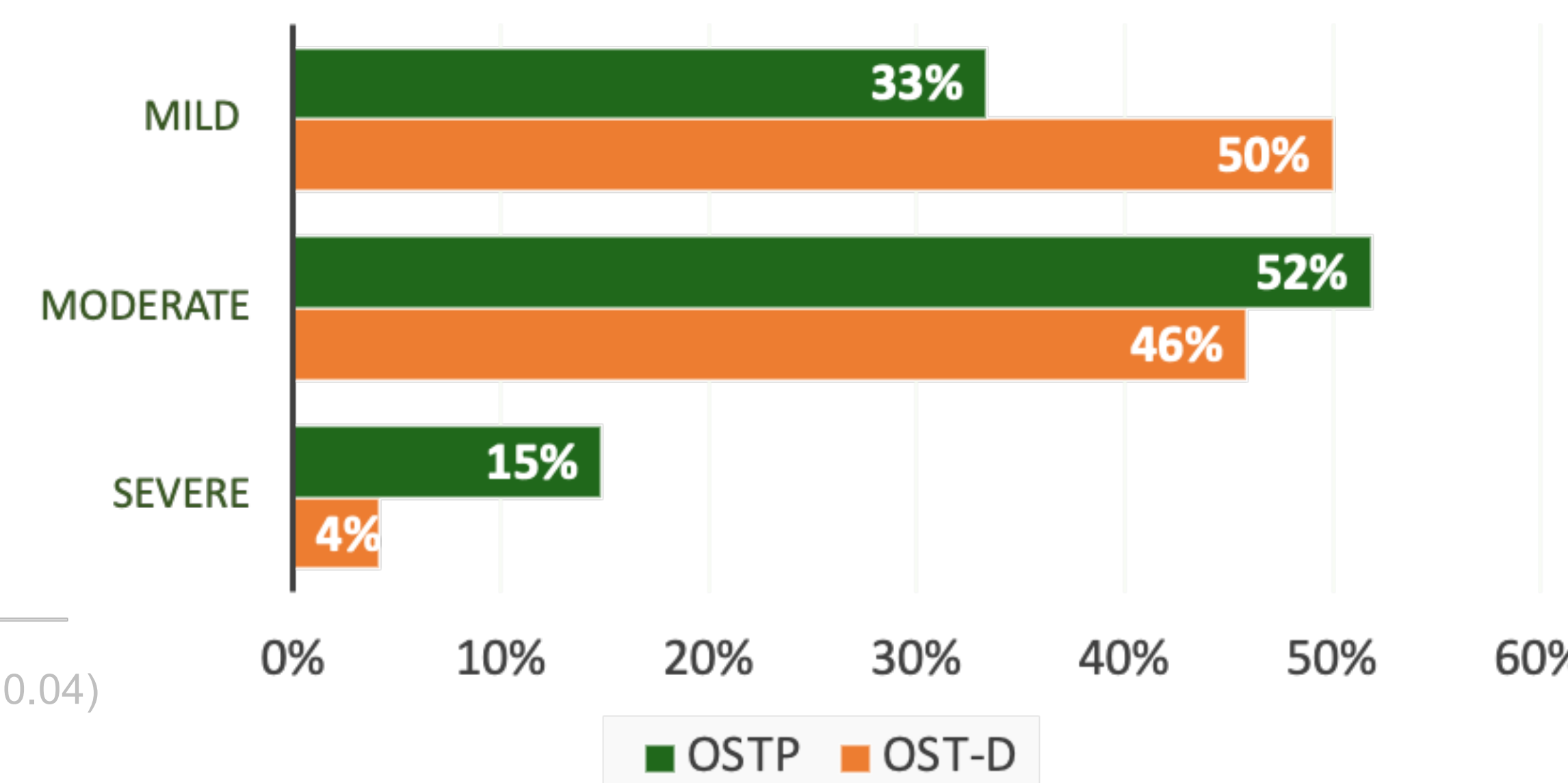
COMPARING EROSIIVE GASTRITIS INCIDENCE. OST-D vs. OSS/PEG



INCIDENCE OF EROSIIVE GASTRITIS



SEVERITY OF EROSIIVE GASTRITIS



RESULTS

- A total of 135 patients underwent EGD at the time of the Colonoscopy during this time period.
- 12 excluded: 1 due to unavailability of preparation data, 11 due to NSAID use or (+) H. pylori infection on biopsy.
- 41 (33%) received OST-D preparation.
- 82 (67%) received either OSS or PEG based bowel preparation.
- Erosive changes were found in 24/41 (58%) of patients in OST-D group, which is significantly higher than OSS and PEG group 24/82 (30%, p = < .01).

COMPARING OST-D VS OST-P

- Among 41 OST-D patients reviewed, 24 (58%) had inflammatory changes characterized by erosions and adherent blood compared to 27/33 (82%) with OST-P (p = 0.04).
- Severity in this study was lower with OST-D; severe erosive gastritis was seen in 1/24 (4%) moderate in 11/24 (46%) and mild in 12/24 (50%) compared to 4/27 (15%), 14/27 (52%) and 9/27 (33%) respectively with OST-P.

CONCLUSION

- This study suggests that increasing time interval between oral sulfate tablets leads to a decrease in the incidence and severity of erosive gastritis, suggesting that erosive changes are related to prolonged contact of OST tablets with the gastric mucosa.
- By allowing greater time interval between tablets, and increasing the amount of water intake, erosive changes were reduced.
- Endoscopists need to be made aware of these findings to decrease incidence and severity of erosive gastritis in patients using OST.