

Introduction

Patients undergoing laparoscopic paraesophageal hernia repair with or without fundoplication occasionally receive PEG tubes for gastric decompression post-operatively. This is a pre-operative or intraoperative decision made by the surgeon. Those who receive PEGs are those who are expected to have gastric atony post-operatively, with increased risk in patients with totally intrathoracic stomachs. Thus far, outcomes regarding the placement of PEG tubes have not been studied. This study examined outcomes related to PEG placement in patients with type III and IV paraesophageal hernias who underwent laparoscopic repair with or without fundoplication.

Methods

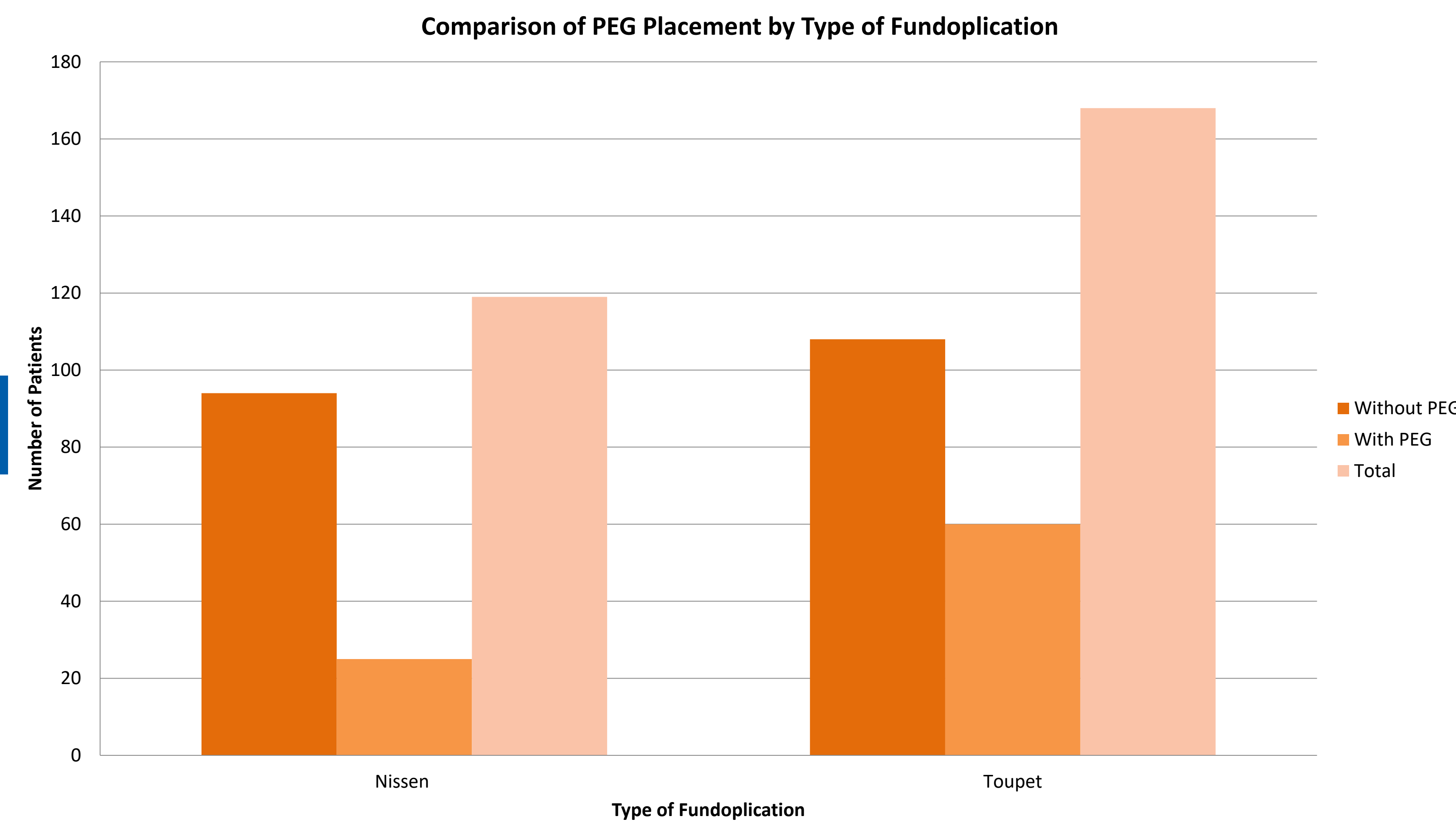
A total of 291 cases from 12/08 – 12/17 were examined. Chart review was performed and data, including preoperative comorbidities, type of fundoplication, type of hernia, volume of intrathoracic stomach, operative duration, length of hospital stay, complications, readmissions, and recurrence rate was examined. Patients who underwent repair with PEG placement were surveyed by telephone about the use of PEG for symptom relief.

No Peg 204 cases	Peg 87 cases	Total 291 cases
Mean Age 63 ± 12	Mean Age 67 ± 12	Mean Age 64 ± 12 (p = 0.004)
BMI 29.9 ± 5.0	BMI 29.8 ± 5.9	BMI 29.9 ± 5.3 (p = 0.802)
Male 25%	Male 31%	Male 26.8% (p = 0.313)

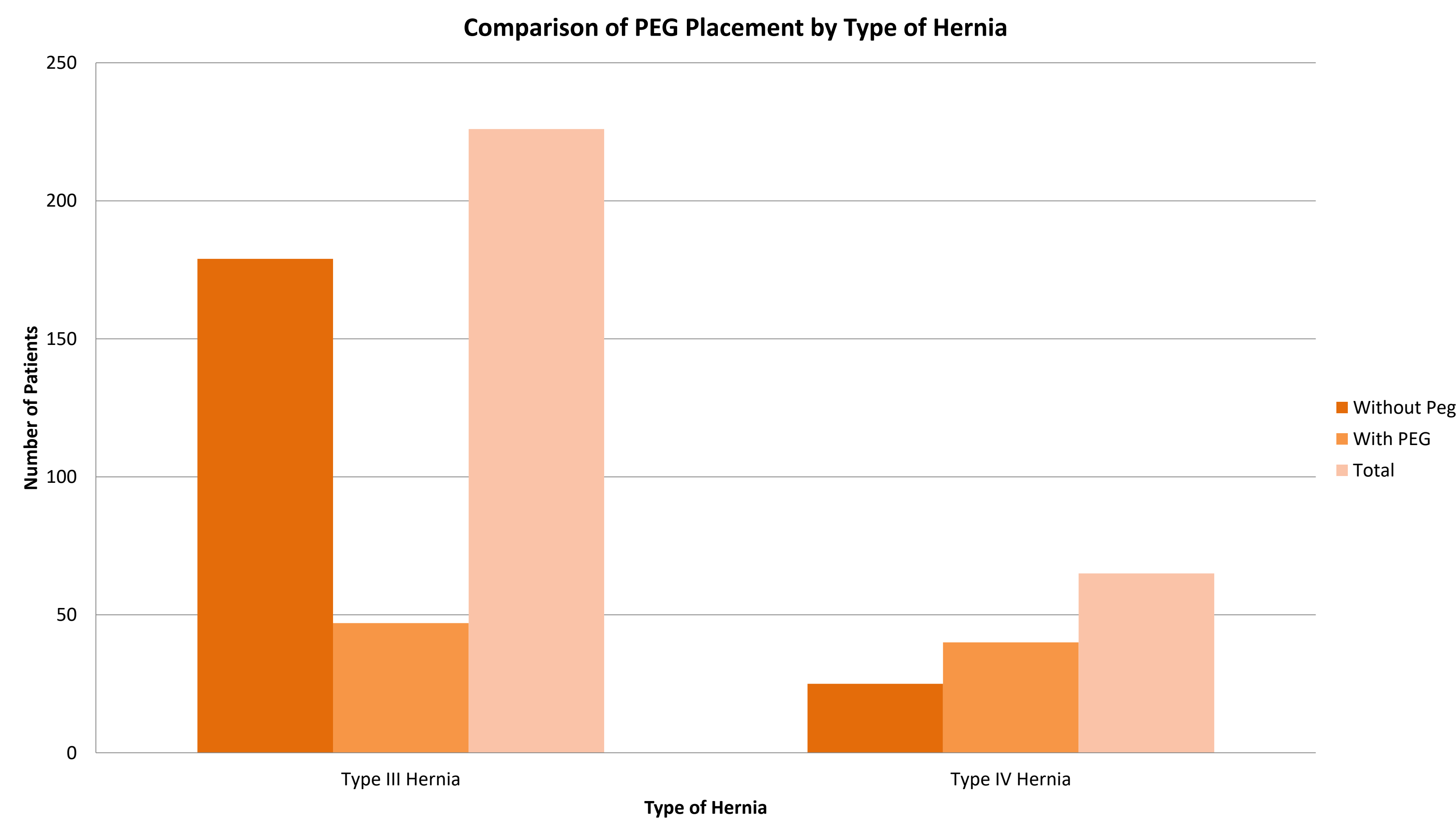
Comorbidities
(p > 0.1 for all
categories)

Diabetes, Tobacco Use, COPD, Asthma,
Cancer, CAD, HTN, Renal Failure

Results

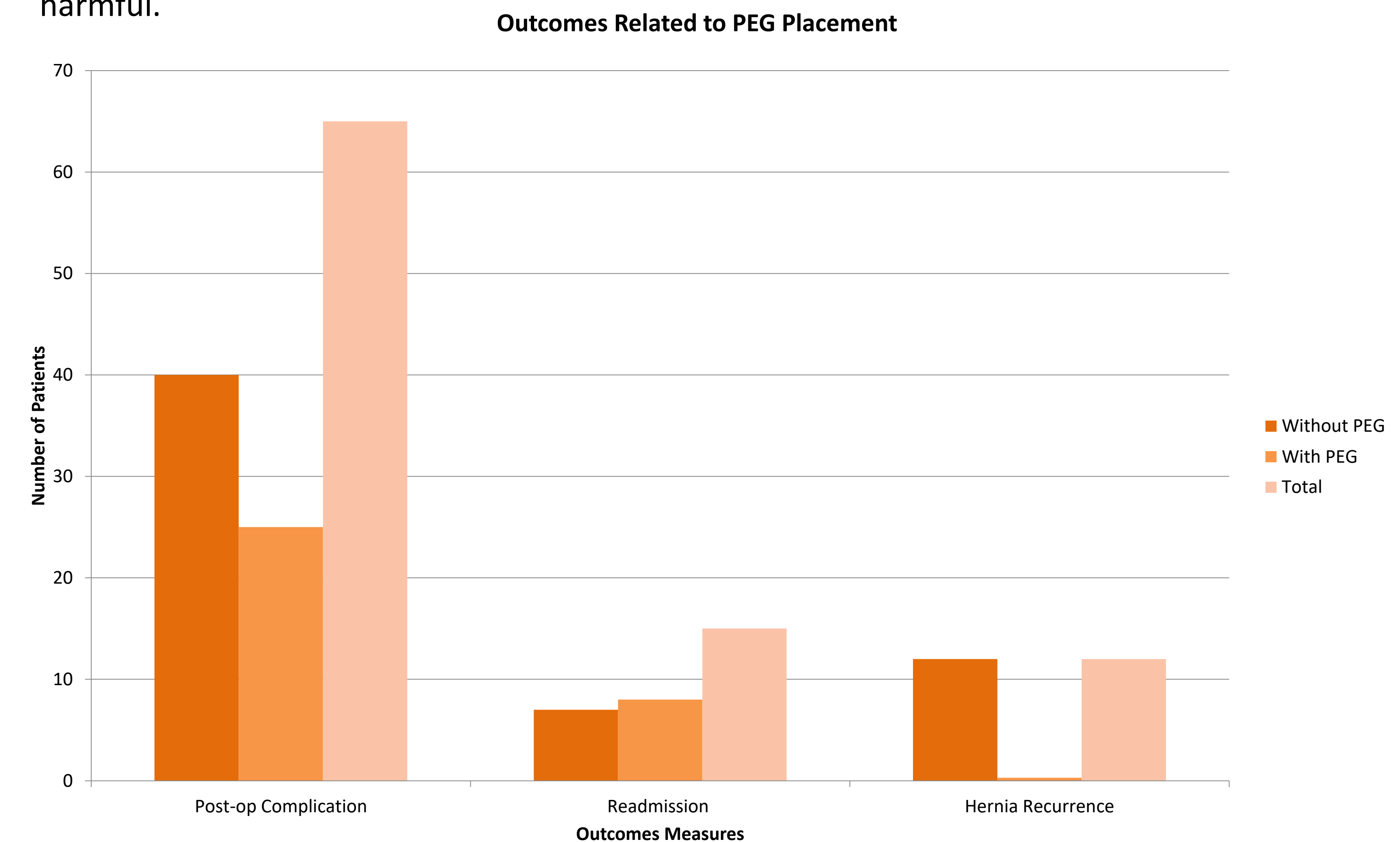


Graph 1. Type of fundoplication conferred a p value of 0.009. Type of hernia conferred a p value of <0.001



Graph 2. Presence of a type IV hernia, compared to a type III hernia, increased the rate of PEG placement (p<0.001)

Out of 291 total cases examined, 204 patients underwent hernia repair without PEG placement and 87 patients underwent PEG placement. Higher hernia class resulted in increased rate of PEG placement (p < 0.001). Additionally, PEG placement rate was highest in patients who had a totally intrathoracic stomach intraoperatively (p < 0.001). Patients who were selected for PEG placement intraoperatively had a longer duration of operation by an average of 28 minutes compared to those who did not undergo PEG placement. The postoperative complication rate was slightly higher in the PEG group, which was not statistically significant (p = 0.093). The hernia recurrence rate was higher in the group which did not undergo PEG placement (5.9%) compared to the PEG group (0%, p = 0.021). The patients reached by telephone survey overall thought the PEG was more beneficial than harmful.



Graph 3. Outcomes measures related to PEG placement. Post –op complications were lower in patients who received PEGs, although not statistically significant. Complications included respiratory failure, cardiac complications (NSTEMI, afib), urinary retention, ileus, diarrhea, and surgical site infection. There were no instances of hernia recurrence in the patient population who underwent PEG placement.

Conclusions

In this examination of patients undergoing paraesophageal hernia repair with or without PEG tube placement, PEG tubes were used more often in patients with greater portions of intrathoracic stomach and longer duration of operation. Complication and readmission rates between the two groups were similar. PEG tube placement is an adjunct to laparoscopic paraesophageal hernia repair with or without fundoplication, and may be beneficial in certain patients, particularly with totally intrathoracic stomachs, to relieve symptoms of nausea and bloating post-operatively without increasing the risk of harm.