**BACKGROUND/OBJECTIVE:**

While G-POEM remains an effective and exciting treatment for GP patients, predictors of clinical success remain poorly characterized. Botox injection of the pylorus prior to committing to G-POEM can help differentiate those who might have a favorable clinical response to this procedure in patients with GP.

**METHODS:**

To evaluate the utility of Botox injection prior to G-POEM, 124 patients with clinically diagnosed GP who underwent a GPOEM were assessed in this retrospective cohort study. All G-POEM procedures were conducted at a single center and were completed between February 2018 and May 2023. Patients who had received intrapyloric Botox injection (n=79) had QoL and clinical success rates compared to patients who received other treatment options (n=45). Results were assessed at 1-, 3-, 6-, 12-, 24-, 36-, 48-months post G-POEM.

**RESULTS:**

When assessing symptom severity, the difference between the change in GCSI values for Botox patients and patients receiving other prior therapy was statistically significant at 6 months post-GPOEM; +1.27 for Botox patients vs +0.55 for other treatments (p-value of 0.03). At this 6-month checkpoint, 64% of the Botox group achieved clinical success compared to 37.5% for the other treatment group. When comparing QoL, intrapyloric Botox injection has statistically significant improvements in SF-36 total score at 1, 3-, 6-, 12-, and 36-months post G-POEM, while patients receiving other treatments had no statistically significant improvements in their SF-36 total scores.

**CONCLUSION:**

We hypothesize that clinical improvement on pre GPOEM Botox selects patients with a higher component of pyloric spasm who end up responding more favorably to G-POEM.

**Scientific/Clinical/Policy Impact and Implications:**

Intrapyloric Botox injection is technically feasible in almost all patients with GP and does not require special expertise, training, or equipment; therefore, this should be strongly considered prior to referring a patient for G-POEM.