# ROBOTIC HELLER MYOTOMY FOR ESOPHAGOGASTRIC JUNCTION OUTLET OBSTRUCTION WITH PARAESOPHAGEAL LIPOMA: CASE OF IMPEDANCE PLANIMETRY AFFECTING INTRA-OPERATIVE DECISION MAKING

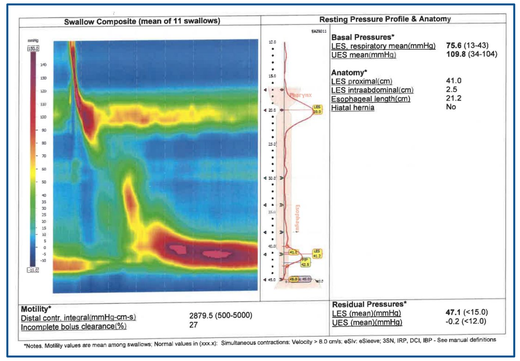
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## Patient History

- 50 year old female
- History of Barrett's esophagus, constipation, and known 3cm hiatal hernia.
- Botox injection x 2 for presumed achalasia

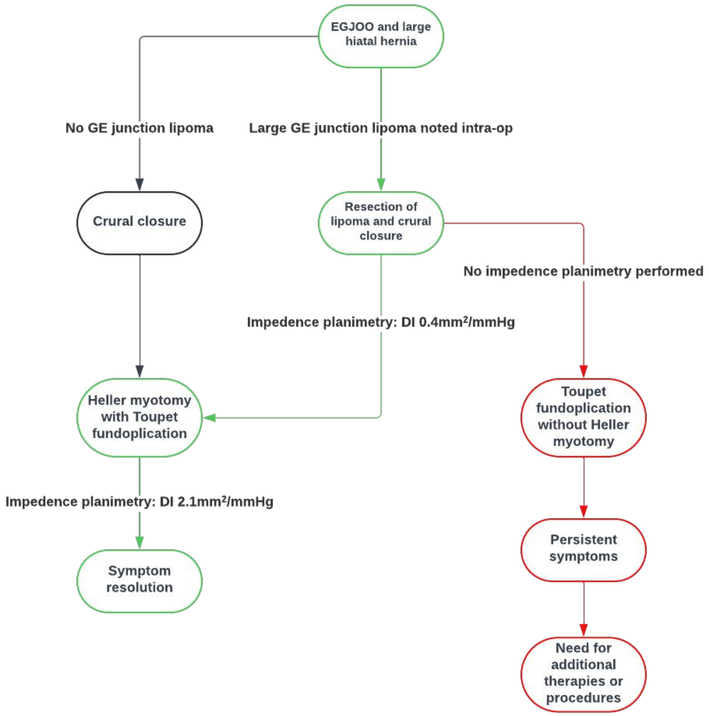
Barium esophagram
- Delayed emptying of esophagus
- Severe stricture at distal esophagus
- Moderate hiatal hernia

Manometry
- Mean integrated relaxation pressure (IRP) = 47.1 mmHg
- Distal contractile integral (DCI) = 2879.5 mmHg-cm-s
- Distal latency 6.7
- 0% failed swallows
- Consistent with esophagogastric junction outlet obstruction (EGJOO)




EGD
- Medium hiatal hernia, Hill grade 4 flap valve
- Otherwise normal

## Surgical Decision Tree




## Surgery

- Laparoscopic, robotic-assisted
- Large lipoma noted at GE junction during hiatal hernia repair which was resected.
- Initially thought lipoma was causing EGJOO and thus no myotomy was planned.
- Impedance planimetry performed after crural closure and lipoma resection:
  - **Distensibility index of 0.4 mm$^2$/mmHg at a balloon pressure of 40 mmHg: persistent EGJOO.**
- Heller myotomy and Toupet fundoplication performed.
- Impedance planimetry performed after myotomy and fundoplication:
  - **Distensibility index of 2.1 mm$^2$/mmHg at a balloon pressure of 40 mmHg: suggests resolution of EGJOO.**

## Conclusions

- Impedance planimetry is a useful intraoperative adjunct to foregut procedures and can alter intraoperative decision making.
- In the current case, impedance planimetry led us to proceed with Heller myotomy rather stopping at hiatal hernia repair with lipoma resection. This decision likely prevented persistent postoperative symptoms which could have led to unnecessary additional therapies and procedures.