Morgagni Hernia Repair: a Significant Experience in One Healthcare System

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Background

- 2-4 % of all diaphragmatic hernias are Morgagni hernias. This is a congenital diaphragmatic hernia that occurs anteromedially through the diaphragm at Morgagni's foramen.
- Presenting symptoms can be gastrointestinal or respiratory, however they can be asymptomatic and found incidentally.
- The Geisinger Foregut Program has a significant experience with laparoscopic repair of Morgagni hernias.

Question

- The aim of our study was to analyze the outcomes of our multi-institutional experience with Morgagni hernia repair.

Methods

- Retrospective study of one healthcare system.
- January 2008 to January 2020.
- Adults ≥ 18 years old who underwent Morgagni hernia repair.

Results

Preoperative	
Variable	**Overall (n=27)**
Mean Age (years)	61.5 ± 15.1
Mean BMI (kg/m²)	33.5 ± 8.8
Female	20 (74.1)
Smoking History	12 (44.4)
ASA Classification	
2	8 (29.6)
3	16 (59.3)
4	3 (11.1)
Preoperative Symptoms	
Gastrointestinal only	9 (33.3)
Respiratory only	8 (29.6)
Both	8 (29.6)
None	2 (7.4)

Intraoperative	
Variable	**Overall (n=27)**
Approach	
Laparoscopic Abdominal	25 (92.6)
Open Abdominal	1 (3.7)
Open Abdominal & Thoracic	1 (3.7)
Mean Operative Time (min)	147.0 ± 70.9
Emergent	12 (44.4)
Incarceration	11 (40.7)
Bowel Resection	3 (11.1)
Median Largest Dimension (cm)	7.0 [6.0-9.0], n=15
Laterality	
Right	20 (74.1)
Left	3 (11.1)
Bilateral	4 (14.8)
Mesh Reinforcement	17 (63.0)
Sac Resection	17 (63.0)
Sac Contents	
Large Intestine	20 (74.1)
Omentum	15 (55.6)
Small Intestine	8 (29.6)
Stomach	4 (14.8)

Postoperative	
Variable	**Overall (n=27)**
Median Length of Stay (days)	2.0 [1.1-3.8]
30-Day Readmission	3 (11.1)
Median Follow-up Time (days)	401.0 [120.0-1269.0]

Complications	
Overall	**9 (33.3)**
Incisional Hernia	2 (7.4)
Cardiopulmonary	4 (14.8)
Gastrointestinal	3 (11.1)

Mean ± Standard Deviation
Frequency (%)
Median [Interquartile Range]

Conclusion

- The frequency of gastrointestinal (GI), respiratory and combined GI and respiratory symptoms was about 30% for each.
- Most are right sided hernias.
- Incarceration occurs in less than half of patients.
- Hernia contents: large intestine > omentum > small intestine > stomach.
- Morgagni hernia presented emergently in more than 40% of cases:
  1. Laparoscopic Morgagni hernia repair is feasible and safe under both elective and emergent circumstances.
  2. Since > 40% present emergently and outcomes are good with short hospital stays, we believe that incidentally-identified Morgagni hernias should be repaired laparoscopically by experienced centers.