P450: Large Hiatal Hernias: Watch and Wait, or Surgical Repair?

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Background

- Laparoscopic-assisted hiatal hernia (HH) repair has been reported to be safe and feasible.
- Uncertainty exists regarding whether asymptomatic large HHs (L-HH) should be treated or if a watch-and-wait strategy should be used.
- In this study, we investigated and analyzed perioperative outcomes of patients who underwent primary HH repair at our high-volume center.

Material and Methods

- Approval by the Institutional Review Board was obtained.
- Our prospectively maintained database for esophageal benign diseases was queried.
- Data on patients who underwent primary minimally invasive HH repair between August 2016 and December 2019 was extracted.
- All procedures were performed by a single surgeon (SKM).
- Hernias were classified in 4 groups: small (S-HH [sliding]), moderate (M-HH [<50% herniated stomach]), large (L-HH [50%–75% herniated stomach]) and giant (G-HH [≥75% herniated stomach]).
- Data on preoperative assessment, surgical procedure, and postoperative morbidity were analyzed. Complications were defined according to the Clavien-Dindo (CD) classification.
- Continuous variables were reported as mean ± SD. Categorical variables were presented as absolute number and percentage. One way Anova for independent variables and Student's t-test were used to compare continuous variables of different groups. Categorical variables were compared with Fisher's exact test or χ^2-test. Statistical significance was set at p<0.05.



Results

Study Population

341 Patients
Minimally Invasive Procedures

→ **171 Patients**
-Heller Myotomies
-Redo-Antireflux Surgeries
-Epiphrenic Diverticula
-Transoral Incisionless Fundoplications
-Endostim

170 Patients
Primary HH-Repairs

46 (27.0%) S-HH | **69 (40.6%) M-HH** | **20 (11.8%) L-HH** | **35 (20.6%) G-HH**

Pre-Operative Characteristics for S-HH, M-HH, L-HH and G-HH respectively

- Mean age was 58.5 ± 11.0, 61.9 ± 11.3, 70.7 ± 10.3 and 72.6 ± 9.7, **(p<0.001)**
- Mean BMI (Kg/m^2) was 28 ± 4.5, 29 ± 4.6, 31 ± 9.9 and 27 ± 3.9, **(p=0.04)**
- Male subjects were 13 (28.3%), 19 (27.5%), 2 (10.0%) and 11 (31.4%), while female subjects were 33 (71.7%), 50 (72.5%), 18 (90.0%) and 24 (68.6%), (p=0.3)
- There was 1 (5%) conversion to open-surgery in a patient with L-HH due to adhesions

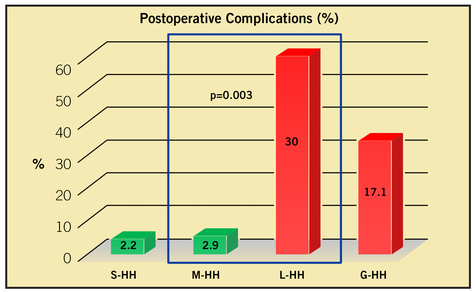
Operative Results

	S-HH	M-HH	L-HH	G-HH	P value
Urgent OP (Incarceration)	0 (0%)	0 (0%)	0 (0%)	8 (22.8%)	**0.04**
OP-time (Min.)	69.6 ± 20.9	83.5 ± 26.1	99.0 ± 29.1	98.6 ± 24.9	**<0.001**
Blood Loss (mL)	22.1 ±17.8	23.5 ± 12.9	36.0 ± 33.5	34.5 ± 20.6	**0.002**
Intra-OP Complications	2 (4.3%)	1 (1.4%)	1 (5%)	2 (5.7%)	>0.05

Postoperative Results

	S-HH	M-HH	L-HH	G-HH	P value
Hospital Stay (Days)	1.6 ± 1.9	1.4 ± 0.9	2.8 ± 3.1	1.9 ± 1.4	**0.01**
Clavien-Dindo I	1 (2.2%)	3 (2.9%)	5 (25%)	2 (5.7%)	**0.01**
Clavien-Dindo II	0	0	0	3 (8.6%)	**0.03**
Clavien-Dindo III	0	0	1 (5)	0	.22
Clavien-Dindo IV	0	0	0	1 (2.8%)	0.33

- None of the patients treated died during the study period.



- There was a significant increase in morbidity across M-HH and L-HH.

Conclusion

Laparoscopic HH repair is feasible and safe, even in patients with L-HH and G-HH, but HH likely enlarge with aging, and larger HH are associated with increased perioperative morbidity. Hence, strong consideration should be given to repair M-HH.

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