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HIATAL HERNIA

Robotic emergency treatment of strangulated hiatal and diaphragmatic hernias: 15 years experience

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AIM

10-30% of paraesophageal hernias may lead to complications requiring emergency surgery Robotic approach to hiatal hernia repair proved to have several advantages over laparoscopy. The aim of our study is to investigate the use of robotic approach even in emergency settings.

MATHERIALS AND METHODS

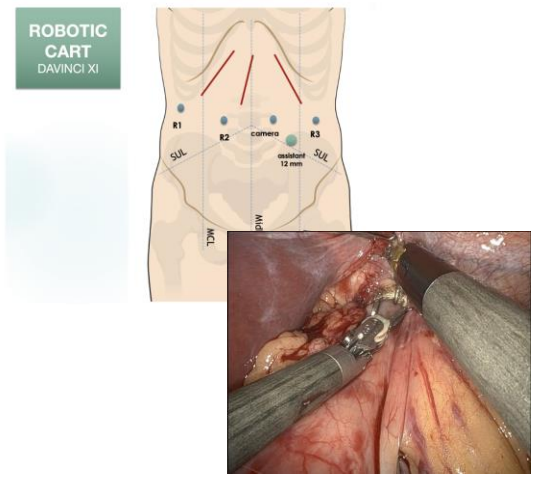
Our experience

OCB – MODENA (January 2009 – February 2025)

130 Robotic Giant Hiatal Hernia repairs

19 EMERGENT ROBOTIC CASES

Port Layout



Gender (M:F)	10:9
Age (years)	74 (30 – 85)

Presenting symptoms n(%)	
Abdominal/thoracic pain	19 (100)
Vomiting/obstruction	13 (76.5)
Gastric bleeding	2 (11.7)
Dyspnea	5 (29.4)

Intraoperative Outcomes	
OR time mean (min)	140 ± 54
EBL (cc)	< 200
Intraoperative complications (n,%) *	3 (15 %)
Conversions (n,%) **	1 (%)

Operative Data	
Diaphragmatic hernias	**6**
Direct suture	3
Suture + Biosynthetic mesh	3
Mean defect size (cm)	5.3
Hiatal Hernia	**13**
Hiatoplasty + Nissen	7
Hiatoplasty + mesh	5
Hiatoplasty	1
Mean defect size (cm)	10.3

*2 patient had intraoperative fissure of the pleura with pneumothorax treated with a thoracic drain, 1 bleeding

**the very first case due to bleeding from the gastric artery

Postoperative outcomes	
LOS (days)	10 (3-26)
Postoperative morbidity	
CD grade I-II, n (%)	3 (15%)
blood transfusion	1
pneumonia	1
Pleural effusion	1
CD grade III-IV, n (%)	2 (10.5%)
PNX with thoracic drain	
Postoperative mortality, n (%)	0
Recurrence, n (%)	4 (21%)

3 years follow up

Small axial asymptomatic hiatal hernia recurrences

CONCLUSIONS

In our experience robotic approach to hiatal hernia repair proved to be safe and effective even in emergency settings. The absence of tactile feedback didn't affect negatively the manipulation of hernia content, and the stable view offered by the system favors working in narrow fields such as the diaphragmatic hiatus. Further studies are needed, since the robotic approach in urgent cases is closely related to the expertise of the surgical team and the availability of the platform.