Robotic-assisted extended transabdominal preperitoneal (eTAPP) hernia repair in the treatment of umbilical and epigastric hernias

Ramon Pini[1], Francesco Mongelli[1,2], Fabiano Iaquinandi[1], Paolo Gaffuri[1], Marco Previsdomini[3], Agnese Cianfarani[1], Davide La Regina[1,2]

(1) Department of Surgery, Bellinzona e Valli Regional Hospital, EOC; (2) Faculty of Biomedical Sciences, Università della Svizzera Italiana, Lugano; (3) Intensive Care Unit, Bellinzona e Valli Regional Hospital, EOC, 6500 Bellinzona, Switzerland

INTRODUCTION

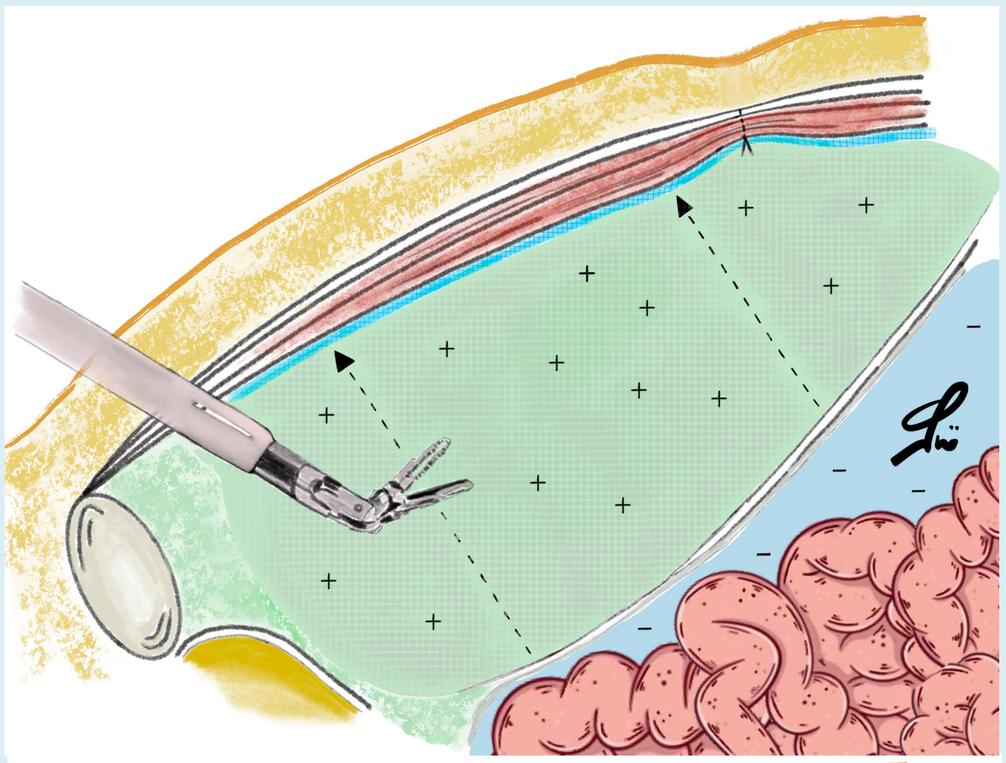
Our study aimed to assess the safety and effectiveness of the robotic-assisted extended totally extraperitoneal (eTEP) repair compared to transabdominal preperitoneal (eTAPP) repair with a suprapubic trocar insertion to treat umbilical and epigastric hernias.

METHODS

We selected from a prospectively maintained database of patients who underwent robotic-assisted umbilical and epigastric hernia repair with a suprapubic approach, either eTEP or eTAPP. We retrieved clinical and follow-up data and a statistical analysis was carried out.

RESULTS

During the study period, 53 patients were included, 32 in the eTEP group and 21 in the eTAPP group. The mean age was 59.0±13.9 years, 45 patients (84.9%) were male, and the mean BMI was 28.0±5.9 kg/m2. Most hernias were umbilical (81.1%) and primary (83.0%). Operative time was slightly shorter for eTEP than eTAPP (106±43 min vs. 126±74 min, p=0.232). No intraoperative complications occurred. Postoperatively, only one case of bleeding and one seroma were recorded. The length of follow-up was 11.3±6.4 months in the eTEP group vs. 20.5±9.7 months in the eTAPP group and no case of recurrence, chronic pain, or significant dysesthesia was recorded.



	eTEP N=32	eTAPP N=21	p
Operative time, min (SD)	106 (43)	126 (74)	0.232
Hernia defect closure, n (%)	32 (100)	21 (100)	1.000
Mesh placement			
• Preperitoneal, n (%)	4 (12.5)	10 (47.6)	**0.005**
• Retromuscular, n (%)	28 (87.5)	11 (52.4)	
Transversus abdominis release, n (%)	0	1 (4.8%)	0.217
Drainage placement, n (%)	1 (3.1)	3 (9.5)	0.329
Intraoperative complications, n (%)	0	0	-
Mesh size			
• Max diameter, cm (SD)	16 (3)	14 (7)	0.298
• Min diameter, cm (SD)	14 (2)	13 (4)	0.400
• Area, cm^2 (SD)	214 (42)	211 (245)	0.951
Postoperative complications, n (%)	2 (6.2)	0	0.247
Length of hospital stay			
• Outpatients, n (%)	10 (31.2)	6 (28.6)	0.837
• Inpatients, days (SD)	2.6 (2.9)	2.3 (1.3)	0.753
Follow-up, months (SD)	11.3 (6.4)	20.5 (9.7)	-

Dichotomous variables are expressed as number with percentage. Continuous variables are expressed as mean with standard deviation (SD).

CONCLUSION

In our study, we found that the eTEP approach to treat epigastric and umbilical hernias was safe and feasible and achieved excellent perioperative and follow-up results. The outcomes were similar to patients undergoing the eTAPP approach, but with the advantages of a shorter operative time and not entering the peritoneum.

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