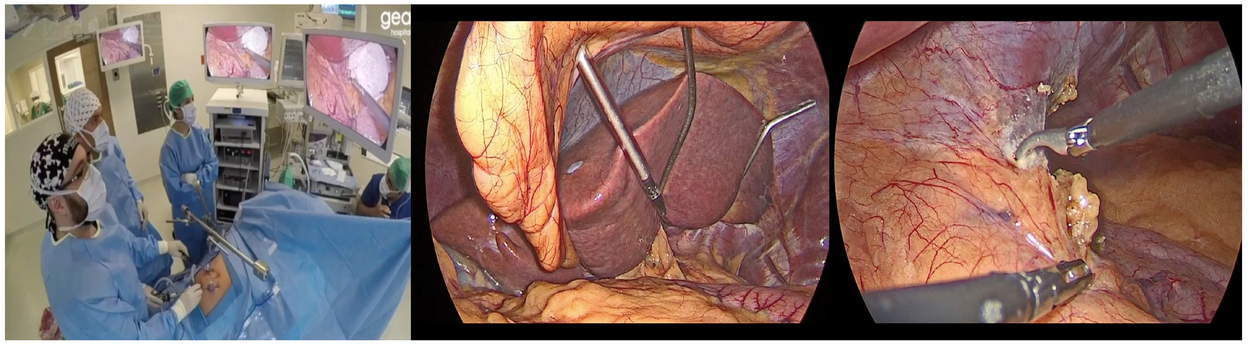
Totally Mini-laparoscopic complete fixed nondeformable fundoplication (Gea fundoplication) is a safe and feasible procedure to treat Gastroesophageal reflux

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Introduction: The complete fixed non-deformable fundoplication or Gea fundoplication was created for the treatment of gastroesophageal disorders, with the aim of ensuring that the anatomical modifications around the LES remain undeformable (fixing the stomach, the GEU, and performing a complete fundoplication to the diaphragmatic aponeurosis and crura using approximately 13-16 knots); with comparable perioperative results to other fundoplications; but with less dysphagia. The development of mini-laparoscopic devices made it possible to perform procedures with less postoperative pain, abdominal wall trauma, better cosmetic results, and better ergonomics for the surgeon. The aim of this study was to prove the safety and feasibility of the complete fixed non-deformable fundoplication using a complete mini-laparoscopic approach for the treatment of GERD.

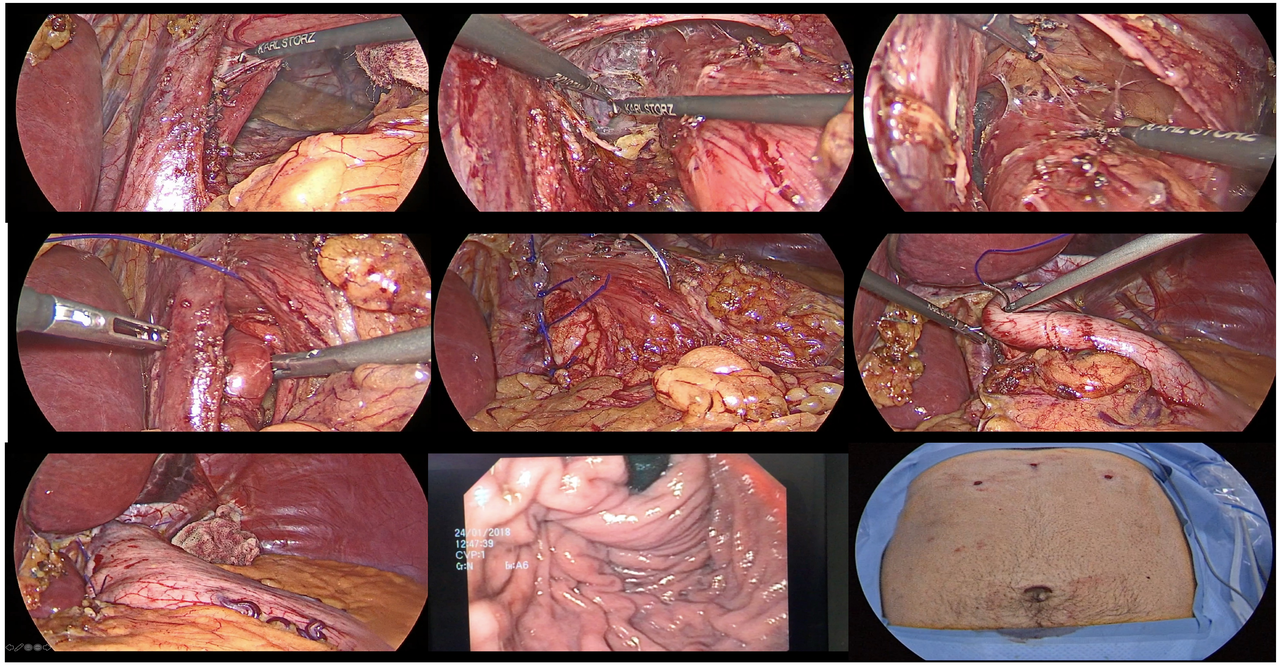


Methods: A retrospective study was performed, evaluating the minilaparoscopic Gea fundoplications performed between May 2018-September 2022. Demographic, endoscopic, physiologic, and surgical variables were evaluated. Surgery was performed using a 10mm trocar for the laparoscopic camara (30º), two 3mm trocars, and a liver retractor of 2.4mm (transdermic grasper); with the procedure performed as the original technique, using extracorporeal Gea knots.

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Results: 40 patients were included, 33 were primary fundoplication with a mean operative time (OT) of 120.77(60-220)min and estimated blood loss (EBL) of 25.22(5-100)cc; 7 were re-fundoplication with a mean OT of 195.5(180-360)min and an EBL of 35.4cc (20-140). All patients presented typical symptoms and 18 atypical, with a length of symptomatology of 92.6(19-380)months and a positive association to symptoms index. The mean hiatal hernia length was 3.9 (3-9cm). Intraoperative endoscopy was performed in all patients to evaluate the fundoplication configuration. All the primary patients were discharged the same day (ambulatory), and the redo patients were discharged after 24hrs. Patients required only 3-5 days of mild oral analgesics. During follow-up (3-53 months) no requirements for PBI had been required due to adequate relief of the symptoms and no dysphagia had been presented.

Conclusion: The totally Minilaparoscopic complete fixed non-deformable fundoplication is a safe and feasible procedure to treat Gastroesophageal reflux (as a primary or redo procedure); with the possibility of lower use of analgesics, smaller incisions, less abdominal trauma, length of stay and with good relief of symptoms during the follow-up but with a higher operative time (mainly due to the absence of advanced energy devices using this approach).