Laparoscopic paraesophageal hernia repair using a 'U' shaped bioabsorbable mesh with fibrin glue fixation for crural closure reinforcement.

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Abstract:

Aims: Recurrence of hiatal hernia is frequent after laparoscopic repair. The use of mesh for hiatoplasty has shown to reduce the rate of recurrence, however complications related to mesh have been reported too. GORE BIO-A Tissue reinforcement could be an alternative material to buttress the hiatal closure without the risk of artificial mesh related complications. Methods: Two patients underwent laparoscopic paraesophageal hiatal hernia repair with Nissen fundoplication using a synthetic bioabsorbable mesh. The mesh is composed of a porous, 3-dimensional web of polglycolide and trimethylene carbonate (GORE BioA Tissue Reinforcement). Fibrin glue (TisseelTM) was applied over the suture closure of the crura, then the "U" shaped mesh was placed over the glue and held in place for a few seconds, and then more fibrin glue was placed over the mesh. After hiatoplasty both patients received a Nissen fundoplication. Results: The mesh was easily placed through a 10-mm trocar. Fixation of the prosthetic using fibrin glue could be done readily and fixation was almost immediately. Peri- and postoperative period was without complications. Three months after surgery gastroscopy showed and intact wrap and no recurrence of hiatal hernia. Conclusion: Crural closure reinforcement without any artificial material can be done readily. The device was easy to use and fibrin glue fixation can be done quickly. This type of prosthetic and fixation technique may provide the necessary reinforcement of the hiatal closure without the risk of erosion.