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Title: Novel technique using a bio absorbable prosthesis with fibrin glue fixation to prevent a Petersen's space hernia.

Introduction: Laparoscopic Roux-En-Y gastric bypass (LRYGB) is a bariatric operation that is effective for long-term weight loss. One feared complication is an internal hernia through Petersen's space, which may result in bowel strangulation. Although the incidence of internal hernia can be reduced through suture closure of Petersen's defect, it does not eliminate the risk.

Objectives: The incidence of an internal hernia through Petersen's space remains as high as 8.6%. This series describes a novel, safe and reliable method to close Petersen's defect that is more effective and technically less challenging than suture closure.

Methods: A prospective, single centre study assessed the effectiveness of Peterson's space closure in 87 patients undergoing LRYGB. Intraoperatively, GORE® bio-A® absorbable mesh was shaped into a funnel and placed in Petersen's space. This was secured in position by the use of fibrin glue.

Results: 87 patients were followed up at 3, 6, 9 and 12 months. Subsequent CT abdominal imaging, hospital admission or return to theatre were assessed in this cohort. 1 patient developed an internal hernia at 5 months post operatively requiring operative intervention. Adequacy of closure was assessed in 2 patients undergoing subsequent laparoscopic cholecystectomy revealing fibrosis and complete obliteration of Peterson's space. The remaining 86 patients were without complication.

Conclusion: The use of a bio absorbable mesh in Petersen's space is a novel, safe and easy technique that could be used to reduce the incidence of an internal hernia through Petersen's defect at least in the early post operative period.