

MEDTRONIC SUMMARY CLINICAL PAPER

CITATION: Rebecca P. Petersen, Eric J. DeMaria, David B. Lautz, Dean J. Mikami, Bradley Needleman and Aurora D. Pryor. "Radial Dilating Trocar System is Associated with a Low Incidence of Port Site Hernias Among Patients": Gastroenterology, Volume 138, Issue 5, S-878; May 2010.

PRODUCT CATEGORY: Radially dilating trocar system

PRODUCT DISCUSSED: VersaStep™ radial dilating trocar system

HOW TO USE THIS ARTICLE

To determine the incidence of trocar site herniation using a radially dilating trocar device without fascial defect closure in obese patients.

METHODS

A retrospective review on 2,780 laparoscopic Roux-en-Y gastric bypass (RYGB) patients with a total of 17,147 trocar sites was performed. There were 1,704 (1,305 Hassons and 399 15 mm trocar) non-dilating trocars used and 15,443 (6,658 12 mm trocars and 8,785 5 mm trocars) dilating trocars used.

All procedures using dilating trocars used the VersaStep™ radial dilating trocar system (Covidien, New Haven, CT, USA). These defects were not closed. Defects were closed if non-dilating trocars were used.

Patients were followed and assessed postoperatively for trocar site hernias at 3-12 month intervals.

RESULTS

- 46 hernias were detected (0.3% trocars, 1.7% patients).
- 93% of trocar site hernias were located in the midline of the abdomen.
- Specimen extractions resulted in a 2.7% hernia rate, for any sized trocar.
- Without specimen extraction, the hernia rate was 1.5%.
- Prior history of hernia, steroid therapy, respiratory disease, diabetes, or port site infection did not increase the risk of developing port site hernias.

AUTHORS' CONCLUSIONS

Port site hernias were more likely to occur when using a larger sized trocar (Hasson), at specimen extraction sites and at trocar sites placed in the midline of the abdomen. It was also found that the incidence of trocar hernias was lower when using a radially dilating trocar system.

Port Type	Incidence
All	0.3%
Non-Dilating	
Hasson	2.7%
15 mm	0.5%
Dilating	
12 mm	0.08%
5 mm	0.02%

*n=2 port sites hernias were undefined